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347	Radio Amateurs World Atlas	9.95	
354	Your Mobile Companion	12.00	
356	Your VHF Companion	10.00	
357	Your Ham Antenna Companion	10.00	
358	Your Packet Companion	10.00	
361	Your HF Digital Companion	10.00	

RSGB PUBLICATION

405	Radio Communications Handbook	$ 38.00	

AIM (AIM)

24-7735P	Coax stripper; RG-58/59/62	$ 21.95	
24-7736P	Coax stripper; RG-59/6/8281	21.95	
24-7739P	Coax stripper; RG-8/11/213	28.95	
37-503	6-socket surge/EMI/RFI filt ....Δ	29.00	6.95
38-305	500ma 3/4.5/6/7.5/9/12vdc adapter	9.95	
38-312	1.2A 1.5/3/4.5/6/7.5/9/12vdc adapt	29.95	
38-384	4A power supply, 5A surge	65.00	39.95
64-12UUP	12' RG-58 w/PL-259s ....D	6.95	

ALINCO (ALI)

EDC-26	DC cord/cgr w/filter; EBP-10NA ....Δ	$ 17.95	12.95
EJ-6U	Tone squelch unit; DJ-162TD ....D	42.00	29.95
DJ-C1T*	2m 300mw cc size HT/lith ion ....D	199.95	69.95
DJ-C4T*	440 300mw cc size HT/lith ion ...D	199.95	69.95
	*No internal spkr DJ-C1T/DJ-C4T - must use earphone		
DJ-C5T	300mw cc size 2m/440 HT/lith ion/spkr	249.95	*149.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EDC-36	Power cable w/filter	24.95	
EME-6	Earphone	11.95	
EME-12	Headset w/earphone/mic/VOX	70.95	
EME-13	Headset w/ear bud/mic/VOX	70.95	
EME-16	Tie-pin mic & earphone	19.95	
EME-17	Boom earphone mic	29.95	
EME-18	Earphone	11.95	
EDS-7	Mic adapt; EME-12/13/15/16/17/18	10.95	
EMS-49	Miniature lapel spkr/mic	35.95	

ALINCO - continued

		Reg	Sale
EMS-50	Speaker/mic	39.95	
DJ-180TH	5w 2m FM HT/batt/cgr/TTP	230.95	*149.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
DJ-280TH	5w 220 FM HT/batt/cgr/TTP	279.95	*169.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EBC-3	Belt clip	5.95	
EBC-5	Shoulder belt w/soft case ....D	54.00	19.95
EBP-24N	7.2v 1200ma batt; 180/580/582T	78.95	
EBP-26N	7.2v 700ma battery; 180/582	41.95	
EBP-28N	12v 700ma batt; 180/582	68.95	
EDC-43	Cig lighter cable	8.95	
EDC-45	Quick charger (not for F1)	84.95	
EDC-49	Batt cgr; EBP-20/22/24/26/28N	23.95	
EDH-11	AA alk pack; DJ-180/580/582T	10.95	
EDH-12	DC jack adapter; DJ-180/280TH	10.95	
EJ-12U	Tone decode unit; DJ-F1T ....Δ	51.95	19.95
EJ-14U	50 ch mem unit; DJ-180/280TH	21.95	
EJ-15U	200 ch mem unit; DJ-180TH	29.95	
EME-6	Earphone	11.95	
EME-10	Headset/VOX/PTT; 160/560/580/582 ....D	71.95	39.95
EME-11	Ear/microphone w/PTT/VOX	52.95	
EME-15	Tie-pin mic w/VOX	55.95	
EME-16	Tie-pin mic & earphone	19.95	
EME-17	Boom earphone mic	29.95	
EMS-2Z	Spkr/mic; 160/560/580/582 ....Δ	44.95	29.95
EMS-51	Speaker/mic	39.95	
ESC-18	Soft case; 180TH/EBP-26N	14.95	
ESC-19	Soft case; 180TH/EBP-28N	18.95	
EBP-31N	7.2v 1200ma nicad; DJ-G1T ....Δ	79.95	59.95
EBP-32N	12v 722ma nicad; DJ-G1T ....D	95.95	69.95
EDC-52	Quick charger; DJ-G1T ....D	119.00	79.95
EDC-55	Wall cgr; EBP30/31/32N; G1T ....Δ	23.95	15.95
EDH-14	Dry cell battery case; DJ-G1T ....Δ	15.95	10.95
EJ-16U	Tone squelch unit; DJ-G1T ....Δ	57.95	39.95
ESC-23	Soft case for EBP-30N; DJ-G1T ....Δ	16.95	12.95
ESC-24	Soft case; EBP-31N/32N; G1T ....Δ	21.95	14.95
DJ-191TH	5w 2m FM HT/batt/cgr/TTP ....D	289.95	*154.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
DJ-G5TH	5w 2m/440 HT/EBP36N/cgr/TT	481.95	*279.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EBC-6	Mobile bracket	16.95	
EBP-33N	4.8v 650ma nicad battery	63.95	
EBP-34N	4.8v 1200ma nicad battery	82.95	
EBP-35N	7.2v 900ma nicad battery	97.95	
EBP-36N	9.6v 650ma nicad battery	67.95	
EBP-37N	4.8v 700ma nicad battery	34.95	
EDC-16B	Cigarette lighter cable w/filter	22.95	
EDC-36	Power cable w/filter	24.95	
EDC-60	Quick charger ....D	79.95	
EDH-16	Dry cell battery case	10.95	
EJ-28U	CTCSS decoder unit; DJ-191T/TH	42.95	
EME-6	Earphone	11.95	
EME-12	Headset w/earphone/mic/VOX	70.95	
EME-13	Headset w/ear bud/mic/VOX	70.95	
EME-15	Tie-pin mic w/VOX	55.95	
EME-16	Tie-pin mic & earphone	19.95	
EME-17	Boom earphone mic	29.95	
EMS-8Z	Remote speaker/mic	48.95	
EMS-47	Spkr/mic w/volume control	25.95	
EMS-51	Speaker/mic	39.95	
ESC-28	Soft case for EBP-33N	10.95	
ESC-29	Soft case for EBP-37N	10.95	
ESC-30	Soft case for EBP-34N/35N/36N	10.95	
DJ-195T	5w 2m FM HT/batt/cgr/TTP	289.95	*159.95
	*Sale price w/instant coupons; coupons expires 11/30/99		
EBC-6	Mobile bracket	16.95	
EBP-48N	9.6v 700ma 5w nicad battery	65.95	
EDC-36	Power cable w/filter	24.95	
EDC-37	13.8v power cable	7.95	
EDC-88	Multi-voltage rapid charger	53.95	
EME-6	Earphone	11.95	
EME-12	Headset w/earphone/mic/VOX	70.95	
EME-13	Headset w/ear bud/mic/VOX	70.95	

ALINCO - continued

		Reg	Sale
EME-15	Tie-pin mic w/VOX	55.95	
EMS-47	Spkr/mic w/volume control	25.95	
EMS-51	Speaker/mic	39.95	
ERW-4	PC cable	27.95	
ESC-36	Soft case for EBP-48N	12.95	
DJ-V5TH	5w 2m/440 FM HT/batt/cgr/TTP	349.95	*239.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EBP-45N	6v 700ma 2w nicad battery	47.95	
EBP-46N	9.6v 700ma 5w nicad battery	65.95	
EDC-36	Power cable w/filter	24.95	
EDC-37	13.8v power cable	7.95	
EDC-43	Cig lighter cable	8.95	
EDC-91	Quick charger	53.95	
EDH-29	Dry cell case for 4-AA's	12.95	
EME-6	Earphone	11.95	
EME-12	Headset w/earphone/mic/VOX	70.95	
EME-13	Headset w/ear bud/mic/VOX	70.95	
EME-15	Tie-pin mic w/VOX	55.95	
EME-16	Tie-pin mic & earphone	19.95	
EME-17	Boom earphone mic	29.95	
EMS-8Z	Remote speaker/mic	48.95	
EMS-47	Spkr/mic w/volume control	25.95	
EMS-51	Speaker/mic	39.95	
ESC-35	Soft case for EBP-45N/46N	12.95	
DJ-S11T	340mw 2m FM HT/battery holder	149.95	*79.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
DJ-S41T	340mw 440 FM HT/battery holder	149.95	*79.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
EBC-6	Mobile bracket	16.95	
EDC-78	Wall charger; (not for alkalines)	10.95	
EDC-78/EBP-25N	Cgr/3 AA nicad bundle Δ	14.95	
EDH-18	12v to 5.5v DC/DC conv/cig plug	33.95	
EME-6	Earphone	11.95	
EME-13	Headset w/ear bud/mic/VOX	70.95	
EME-15	Tie-pin mic w/VOX	55.95	
EME-16	Tie-pin mic & earphone	19.95	
EMS-47	Spkr/mic w/volume control	25.95	
EMS-51	Speaker/mic	39.95	
ESC-27	Soft case	16.95	
DJ-X10T	.1MHz-2GHz AM/FM/SB hand/cell blkd	559.95	*319.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EBP-33N	4.8v 650ma nicad battery	63.95	
EBP-34N	4.8v 1200ma nicad battery	82.95	
EBP-37N	4.8v 700ma nicad battery	34.95	
EDC-16B	Cigarette lighter cable w/filter	22.95	
EDC-36	Power cable w/filter	24.95	
EDC-37	13.8v power cable	7.95	
EDH-16	Dry cell battery case	10.95	
ERW-4	PC cable	27.95	
DR-M03SX	10w 10m FM Xcvr/encoder	249.95	*164.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
DR-M06TH	20w 6m FM Xcvr/TTP/encoder	351.95	*249.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
DR-140TQ	50w 2m FM/TTP/EJ20U tone sq	290.95	*194.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
DR-140TPKT	2m FM/1200 bps packet Xcvr	233.95	*174.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
EMS-14	Desk top microphone	113.95	
EDS-8	Adapter for EMS-14 w/DR-140	24.95	
DR-150TQ	50w 2m FM Xcv/TTP/EJ20U tone sq	327.95	*219.95
	*Sale price w/instant coupon; coupon expires 11/30/99		
CC-150	Cloning cable for DR-150TQ	14.95	
DR-430TQ	440 FM Xcvr/TTP/EJ-20U tone sq	307.95	*229.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
EJ-19U	Memory expansion unit	28.95	
EJ-8U	DTMF squelch; DR-590/592/599 ....Δ	47.95	29.95
DR-605TQ	50/35w 2m/440 FM/TT/EJ24U tone sq	537.95	*339.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
EMS-14	Desk top microphone	113.95	
EDS-8	Adapter for EMS-14 w/DR-605	24.95	
DR-610TQ	50/35w 2m/440 FM/TT/EJ24U tone sq	699.95	*439.95
	*Sale price w/instant coupon; coupon expires 12/31/99		
EBC-8	Front control head bracket; 610TQ	16.95	

ALINCO - continued

	Reg	Sale
EDS-1 Junc box w/ext spkr, mic jacks; 610TQ	56.95	
EDS-2 3 meter ext cable; EDS-1/610TQ	23.95	
EDS-3 5 meter ext cable;EDS-1/610TQ	39.95	
EJ-23U Additional memory unit; 610TQ	35.95	
EMS-11 Extra TTP microphone	50.95	
DX-70TH Comp HF Xcvr/100w 6m/mob bkt	1074.95	*759.95
*Sale price w/instant coupon; coupon expires 11/30/99		
DM-330MVT 30A switching ps/32A surge	229.00	199.95
DM-340MVT 30A power supply/35A surge	199.00	179.95
EBC-8 Front control head bracket	16.95	
EBC-9 Mobile bracket	32.95	
EDS-4 Rem mt acc kit w/5' cable, 2 covers	31.95	
EDS-5 Microphone extension cable	28.95	
EDS-6 15' remote cable	53.95	
EDX-1 Manual coax feed antenna tuner	299.00	269.95
EDX-2 160-10m 200w auto wire ant tuner	344.00	319.95
EMS-14 Desk top microphone	113.95	
DX-77T 160-10m 12v base HF Xcvr	1059.95	*729.95
*Sale price w/instant coupon; coupon expires 11/30/99		
DM-330MVT 30A switching ps/32A surge	229.00	199.95
DM-340MVT 30A power supply/35A surge	199.00	179.95
EDS-5 Microphone extension cable	28.95	
EDX-1 Manual coax feed antenna tuner	299.00	269.95
EDX-2 160-10m 200w autowire ant tuner	344.00	319.95
EMS-14 Desk top microphone	113.95	
ERW-4 PC cable	27.95	

CONSUMER ELECTRONICS

DJ-S46 Family radio svc handheld/batt/cgr	$149.95	*94.95
*Sale price w/instant coupon; coupon expires 12/31/99		
EBC-6 Mobile bracket	16.95	
EDC-78 Wall charger; (not for alkalines)	10.95	
EDH-18 12v to 5.5v DC/DC conv/cig plug	33.95	
EME-6 Earphone	11.95	
EME-13 Headset w/ear bud/mic/VOX	70.95	
EME-15 Tie-pin mic w/VOX	55.95	
EME-16 Tie-pin mic & earphone	19.95	
EMS-47 Spkr/mic w/volume control	25.95	
EMS-51 Speaker/mic	39.95	
ESC-27 Soft case	16.95	

ALPHA DELTA (ALP)

R-T/N 200w thru 1 GHz type N protector .....D	$ 43.95	29.95
Extra **arc-plug** cartridge; **R-T/N** .....Δ	12.95	9.95
HV/N 2kw thru 1 GHz type N protector .....D	46.95	39.95
LT 200w thru 10m 'T' SO-239 protector .....D	29.95	
Extra **arc-plug** cartridge for **LT** or LT/N ....Δ	17.95	12.95
RT/2G 200w 500 MHz lightning protector ....D	39.95	
Extra **arc-plug** cartridge for **RT/2G** .....Δ	12.95	
RT-N/2G 200w thru 1 GHz type N protector .D	46.95	
Extra **arc-plug** cartridge for **RT-N/2G** .....Δ	12.95	
HV/2G 2kw 500 MHz lightning protector .....D	44.95	
Extra **arc-plug** cartridge for **HV/2G** .....Δ	15.95	
HV-N/2G 2kw thru 1 GHz type N protector ...D	49.95	
Extra **arc-plug** cartridge for **HV-N/2G** .....Δ	15.95	
ATT-3G50 200w 3GHz type N surge protector	59.95	
ATT-3G50-HP 2kw 3GHz type N surge protector	59.95	
ATT-3G50U 200w 500MHz surge protector	49.95	
ATT-3G50U-HP 2kw 500MHz surge protector	49.95	
ATT Extra 200w arc-plug cartridge	10.95	
ATT-HP Extra 2kw arc-plug cartridge	10.95	
Delta-2 500 MHz 2-pos coax switch/protector	49.95	
Delta-2/N 1.3 GHz 2-pos type N switch/protector	64.95	
Delta-4 500 MHz 4-pos coax switch/protector	79.95	
Delta-4/N 1.3 GHz 4-pos type N switch/protector	89.95	
D-4 Extra arc-plug; Delta-2/2N/4/4N	9.95	
Delta-C Kit w/ctr ins/2 end ins/static protect	29.95	
SEP Extra arc-plug cart; DX-Ultra/Delta-C	15.95	
Delta-CIN Antenna end insulator .....each	1.95	
DH-1 Hydraulically dampened 41" fold mast/base	249.95	
DH-2 Hydraulically dampened 41" fold mast/no base	229.95	
DX-80 80m 134' complete dipole antenna	49.95	
DX-40 40m 67' complete dipole antenna	39.95	
DX-20 20m 34' complete dipole antenna	39.95	

ALPHA DELTA - continued

	Reg	Sale
DX-A 160-80-40m twin sloper antenna	59.95	
DX-B 160-80-40-30m 60' sloper ant	69.95	
DX-CC 80-10m 5-band 82' no trap, no tuner dipole	119.95	
DX-DD 80-40m 82' Delta Dipole antenna	89.95	
DX-EE 40-10m 4-band 40' no trap, no tuner dipole	99.95	
DX-LB 160-80-40m 100' shortened dipole	119.95	
DX-LB Plus 160/80/40/20/15/10m 100' short dip	149.95	
DX-SD 80/20m 38' short dipole	99.95	
DX-SWL AM broadcast-13m 60' SWL sloper ant	79.95	
DX-SWL-S 90-13m 40' SWL sloper .....Δ	69.95	49.95
DX-Ultra AM broadcast-30MHz 80' SWL dipole	119.95	
Outpost Base tripod mtg sys for mobile ant	199.95	
SK-1 Straight Kent key	129.95	
SP-1 Single paddle Kent key	139.95	
TK-1 Titanic replica straight Kent key	149.95	
TP-1 Twin paddle iambic Kent key	149.95	
VRC Variable response speaker console	249.95	
VRC-2 Ducted port bass reflex speaker	99.95	

Also see OUTBACKER

AMECO PUBLICATIONS (AME)

4-01 Code Course Instruction Booklet	$ 2.00
6-01 Mastering the Morse Code	3.00
12-01 General Class FCC Test Manual	9.95
17-01 Extra Class FCC Test Manual	9.95
23-01 Novice Theory Course	9.95
26-01 Advanced Class FCC Test Manual	9.95
27-01 Novice Class FCC Test Manual	9.95
28-01 Technician Class FCC Test Manual	9.95
78-01 No Code Technician FCC Test Manual	12.95
102-01 Amateur Radio Theory Course	9.95
EN-1 Novice Class Exam	2.50
PC-12-01 General FCC learning software	24.95
PC-17-01 Extra FCC learning software	24.95
PC-26-01 Advanced FCC learning software	24.95
PC-27-01 Novice FCC learning software	24.95
PC-28-01 Technician FCC learning software	24.95
PC-78-01 No Code Tech FCC learning soft	29.95

CODE COURSES - CASSETTE TAPES

100-T Junior code tape, 0-7½ wpm	$ 5.95
101-T Senior code tapes, 0-18 wpm	10.95
103-T Advanced code tape, 8-18 wpm	5.95
104-T Extra Class code tape, 20 wpm	5.95
105-QT General Class QSO code course tape	5.95
106-QT Extra Class QSO code course tape	5.95
107-PC-2 IBM Morse Code Course, version 2.0	29.95
NP-1 Novice Code & Theory Course	12.95

CODE PRACTICE OSCILLATORS & CODE KEYS

K-1 Bakelite type key	$ 10.95
K-4 Brass type key	16.95
OCM-2K Code oscillator & CW monitor kit	19.95
OCM-2W Wired oscillator & CW monitor	24.95

PREAMPLIFIERS

TPA Tunable preamp & indoor active ant	$ 76.95
P-9T Power supply for TPA	9.95
PT-3 2-54 MHz transceiver preamp	124.95
P-12T Power supply for PT-3	9.95

DUMMY LOADS & FILTERS

DL-1500 1500w dummy load .....Δ	$ 59.95	39.95
DL-1500F 1500w dummy load w/fan .....Δ	99.95	49.95
HP-75T 75 ohm high-pass filter	12.95	
HP-300T 300 ohm high-pass filter	12.95	

AMERITRON (AMR)

AL-80B 1kw PEP out linear (3-500Z)	1299.00	1199.95
AL-82 1.5kw PEP out linear (2 3-500Zs)	2295.00	1999.95
AL-572 1.3kw PEP out linear (4 572Bs)	1395.95	1299.95
AL-800 1250w PEP out linear (3CX800A7)	1645.00	1529.95
AL-800H 1.5kw PEP out amp (2 3CX800A7)	2395.00	2199.95
AL-811 600w PEP out linear (3 811As)	649.00	599.95
AL-811H 800w PEP out linear (4 811As)	799.00	749.95
AL-1200 1.5kw PEP out linear (3CX-1200A7)	2395.00	2069.95
AL-1500 1.5kw PEP out linear (8877)	2845.00	2469.95

AMERITRON - continued

	Reg	Sale
ALS-500M 600w PEP out solid state mob amp	799.00	699.95
ALS-600 700w PEP out solid state amp w/ps	1299.00	1129.95
ARB-702I Amplifier Xcvr interface; Icom	39.95	
ARB-702I2 Amp Xcvr interface; Ico 706&MkII/G	39.95	
ARB-702K Amplifier Xcvr interface; Kenwood	39.95	
ARB-702Y Amplifier Xcvr interface; Yaesu	39.95	
ATP-100 Amplifier tuning pulser	49.95	
ATP-102 Deluxe amplifier tuning pulser	59.95	
ATR-15 1.5kw PEP antenna tuner	399.00	369.95
ATR-30 3kw PEP antenna tuner	599.95	549.95
ADL-1500 1.5kw dummy load with oil	69.95	
ADL-2500 2.5kw dummy load with fan	199.95	189.95
ICP-120 120v inrush protector	79.95	
ICP-240 240v inrush protector	79.95	
AWM-30 3kw PEP SWR/wattmeter/rem sens	149.95	139.95
QSK-5 Stand alone T/R switch	349.00	329.95
QSK-5PC PC board kit; T/R switch	249.00	229.95
CF-5 Cooling fan for QSK-5	39.95	
RCS-4 4-pos wireless remote coax switch	139.00	129.95
RCS-8V 160-2m 5-pos remote coax switch	149.00	139.95
RCS-8VN 160-2m 5-pos N rem coax switch	159.00	149.95

Note: RCS-8V/VN require 8-wire control cable.

AMIDON (AMI)

1:1-HBH50 W2FMI 1:1 dipole/beam balun	$ 49.95
1.5:1-HB75 W2FMI 1.5:1 dipole balun	69.95
2:1-HB100 W2FMI 2:1 dipole/quad loop balun	69.95
4:1-HB50 W2FMI 4:1 direct connect beam balun	49.95
4:1-HBM200 W2FMI 4:1 folded dipole/LP balun	49.95
4:1-HB/U200 W2FMI 4:1 off center fed balun	69.95
4:1-HBHT200 W2FMI 4:1 G5RV/LP/ladder line balun	69.95
6:1-HB300 W2FMI 6:1 300 ohm folded dip balun	69.95
6:1-HB/U300 W2FMI 6:1 off center fed balun	89.95
9:1-HB450 W2FMI 9:1 twin lead balun	89.95
12:1-HB600 W2FMI 12:1 rhombic/V-beam balun	199.95
1.5:1-HU75 W2FMI 75:50 ohm unun	49.95
1.56:1-HDU50 W2FMI 50:32&18 ohm unun	49.95
1.78:1-HDU50 W2FMI 50:28&12.5 ohm unun	49.95
1.78:1-HMMU50 W2FMI multimatch unun	69.95
2:1-HDU50 W2FMI 50:22&25 ohm unun	49.95
2:1-HDU100 W2FMI 100&112.5:50 ohm unun	49.95
4:1-HCU50 W2FMI 50:12.5 ohm unun	49.95
9:1-HU50 W2FMI 50:5.56 ohm unun	49.95
BEV-U50 W2FMI Beverage antenna unun	69.95
RFI-KIT-5 Ferrite/toroid RFI kit	30.95
RFI-KIT-6 Ferrite/toroid RFI kit	35.95

Antenna Specialists (ASP)

AP-143 2m on glass cellular look-alike ant	$ 78.25	69.95
APR151.3 2m 3db on glass antenna	75.00	69.95
KAV-382 On glass replacement mtg kit	11.95	
MONR31 L/H/U gain gnd plane monitor ant	107.37	89.95
MONR33 L/H/U roof mt low prof monitor ant	53.95	
MONR51 L/H/U magnet mt monitor antenna	62.95	
MON-52 L/H/U/800MHz trunk lip monitor ant	65.95	
MON-63 Coupler for scanner on car antenna	26.95	

Antennas America (ANA)

HVA-146 75w 2m disguised decal antenna	$ 69.95
HVA-460 75w 440 disguised decal antenna	69.95

Antenna Supermarket (ANT)

Eavesdropper* 60-11m trap dipole SWL ant	$ 79.95

*Specify **SO-239** or **twin**-lead

ANTENNA WORLD (ANW)

COM136-4500NP VHF/UHF port dipole/BNC	$ 19.95

ARROW Antenna (ARA)

146/437-10 3 el 2m/7 el UHF handheld beam	$ 73.95
10w duplexer (installs in boom)	59.95

ARTSCI (ART)

Amateur Handbook (Hambook)	$ 14.95
Simpleton's Handy Reference book	2.00

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

ARTSCI - continued

	Reg	Sale
Lost Users Manuals	19.95	
US **Repeater Y2K** Mapbook 99/2000 edition	9.95	

ASTATIC (AST)

10DA-L Dynamic mic head (no stand or cable)	$ 69.99	
D-104-L Crystal mic head (no stand or cable)	42.99	
T-UG9 Amplified desk stand	52.95	
Night Eagle Brass/black crystal desk mic	129.99	119.95
T-UG9-D104 Amp mic, 6-wire w/stand	99.99	94.95
T-UP9-D104-SE Silver Eagle 6-wire amp	129.99	119.95
MC-320 Crystal mic cartridge for D-104	19.99	

ASTRON (ASR)

RS-4L 3A ps, 4A surge, w/cig lighter socket	$ 57.95	49.95
RS-7A 5A power supply, 7A surge	68.95	59.95
RS-10A 7.5A power supply, 10A surge	85.95	69.95
RS-12A 9A power supply, 12A surge	99.95	79.95
RS-12S 9A ps, 12A surge, w/speaker	112.95	89.95
RS-20A 16A power supply, 20A surge	121.95	99.95
RS-35A 25A power supply, 35A surge	197.95	149.95
RS-35A/220V 220v 25A ps, 35A surge	217.75	169.95
RS-50A 37A power supply, 50A surge	285.95	219.95
RS-70A 57A power supply, 70A surge	339.95	259.95
RS-20M 16A ps w/meters, 20A surge	144.95	119.95
RS-35M 25A ps w/meters, 35A surge	204.95	169.95
RS-50M 37A ps w/meters, 50A surge	314.95	239.95
RS-70M 57A ps w/meters, 70A surge	372.95	289.95
VS-20ML Variable 16A ps/meters, 20A surge	170.95	139.95
VS-35M Variable 25A ps/meters, 35A surge	238.95	189.95
VS-50M Variable 37A ps/meters, 50A surge	330.95	259.95
RM-35M 25A rack mt ps/meters, 35A surge	318.95	249.95
RM-50M 37A rack mt ps/meters, 50A surge	354.95	279.95
RM-60M 50A rack mt ps/meters, 55A surge	467.95	359.95
SS-25 20A switching ps, 25A surge	131.60	109.95
SS-30 25A switching ps, 30A surge	144.00	119.95
SS-25M 20A switching ps/meters, 25A surge	159.50	129.95
SS-30M 25A switching ps/meters, 30A surge	171.90	139.95
12/115 200w solid state 12vdc-115vac inverter	86.95	69.95
2412 9A 22-32vdc to 13.8vdc converter ....D	60.30	39.95
N2412-12 9A 22-32vdc to 13.8vdc converter	60.30	49.95
N2412-24 16A 22-32vdc to 13.8vdc converter	89.75	79.95

AZDEN (AZD)

AD-16 DC power cord for HT ....D		7.95
HS-03 Boom mic/headphones; HF Xcvr ....D		39.95
LC-16 Soft case for HT ....D		12.95
PTT-01 Switch; boom mic/headphones ....D		24.95

B & K (B&K)

330 750A AC multi-function clamp meter ..Δ	$ 89.00	49.95
541 Component comparator ....D	449.00	249.95
830 Autoranging capacitance meter ....Δ	339.00	199.95
1646 0-16V, 0-10A power supply ....D	499.00	269.95
2831A Digital bench multimeter ....Δ	299.00	189.95

BMI (BMI)

972A 12" 12-hour wall clock	$ 28.95	
972AD 14" 12/24-hour wall clock	32.95	
973A 12" 24-hour wall clock	49.95	
Nitelogger II Auto recorder activator	69.95	
RC-1A Impedance matching patch cord	19.95	

B & W (B&W)

LOW-PASS FILTER

FL-10/1500 1.5-30 MHz, 1kw, 52 ohms ....D	$ 75.95	

ANTENNAS

AP-10 51" portable 40/20/15/10/6/2m ant	$ 69.95	
AT-55 40/20/15/10m 55' trap antenna	87.95	82.95
AT-110 80/40/20/15/10m 110' trap antenna	99.50	94.95
AS-160 160/80/40/20m 137' trap dipole	164.50	154.95
AS-80 80/40/20m 78' trap dipole	127.50	119.95
AS-40 40/20/15/10m 40' trap dipole	164.50	154.95
AS-20 20/15/10m 20' trap dipole	127.50	119.95

B & W - continued

	Reg	Sale
AC-1.8-30 Continuous 1.8-30 MHz antenna	198.00	179.95
ACS-1.8-30 Continuous 1.8-30MHz stainless ant	298.00	269.95
AC-5-30 Continuous 5-30 MHz 65' antenna	198.00	179.95
ACS-5-30 Continuous 5-30 Mhz stainless ant	298.00	269.95
ASW-90 500 KHz - 30 MHz 90' receive only ant	98.50	94.95
AXS-160 160/30m 96' trap dipole	99.50	94.95
AXS-80 80/40/15m 65' trap dipole	127.50	119.95
BWD-1.8-30 1.8-30 MHz 90' folded dipole	198.00	179.95
BWDS-1.8-30 1.8-30 stainless 90' folded dip	298.00	269.95

BELDEN (BEL)

52 OHM COAXIAL CABLE

8216 RG-174 (sub-miniature) ....per ft.			27¢
8216 ....**100** ft. Roll		37.29	25.95
8216 ....**500** ft. Roll		129.87	94.95
8216 ....**1000** ft. Roll		259.74	179.95
9201 RG-58 (solid center) ....per ft.			21¢
9201 ....**100** ft. cut		29.74	19.95
9201 ....**500** ft. Roll		109.89	84.95
9201 ....**1000** ft. Roll		216.45	149.95
8240 RG-58U (solid center) ....per ft.			27¢
8240 ....**100** ft. Roll		38.20	25.95
8240 ....**500** ft. Roll		131.00	94.95
8240 ....**1000** ft. Roll		262.00	179.95
8259 RG-58AU (stranded center) ....per ft.			30¢
8259 ....**100** ft. Roll		43.00	27.95
8259 ....**500** ft. Roll		137.00	94.95
8259 ....**1000** ft. Roll		276.00	179.95
8219 RG-58AU (stranded, foam) ....per ft.			34¢
8219 ....**100** ft. Roll		57.25	30.95
8219 ....**500** ft. Roll		155.00	104.95
8219 ....**1000** ft. Roll		387.50	199.95
8262 RG-58C (non-contaminating) ....per ft.			38¢
8262 ....**100** ft. cut			34.95
8262 ....**500** ft. Roll		173.00	124.95
8262 ....**1000** ft. Roll		346.00	229.95
9258 RG-8X (stranded, foam) ....per ft.			39¢
9258 ....**100** ft. cut		81.25	34.95
9258 ....**500** ft. Roll		217.56	129.95
9258 ....**1000** ft. Roll		490.00	239.95
8237 RG-8U ....per ft.			64¢
8237 ....**100** ft. Roll		102.00	59.95
8237 ....**500** ft. Roll		390.00	249.95
8214 RG-8U (foam) ....per ft.			59¢
8214 ....**100** ft. Roll		101.00	54.95
8214 ....**500** ft. Roll		452.00	259.95
8214 ....**1000** ft. Roll		898.00	489.95
9913 RG-8U (low loss) ....**100** ft. Roll		113.00	59.95
9913 ....**250** ft. Roll		244.00	129.95
9913 ....**500** ft. Roll		486.00	239.95
9913F RG-8U (low loss, flexible) ....per ft.			87¢
9913F ....**100** ft. Roll		134.00	79.95
9913F ....**250** ft. Roll		289.00	159.95
9913F ....**500** ft. Roll		575.00	299.95
9251 RG-8A (non-contaminating) ....per ft.			92¢
9251 ....**100** ft. Roll		132.09	84.95
9251 ....**500** ft. Roll		492.84	319.95
8267 RG-213 (non-contaminating) ....per ft.			87¢
8267 ....**100** ft. cut			79.95
8267 ....**500** ft. Roll		597.18	349.95
8242 RG-9U (double shielded) ....per ft.			5.95
8242 ....**100** ft. Roll		715.00	369.95

75 OHM COAXIAL CABLE

8241 RG-59U (73 ohm, solid center) ...per ft.			30¢
8241 ....**100** ft. Roll		44.00	26.95
8241 ....**500** ft. Roll		123.00	84.95
8241 ....**1000** ft. Roll		246.00	159.95
8238 RG-11 (75 ohm, stranded center) per ft.			84¢
8238 ....**100** ft. cut		124.32	79.95
8238 ....**500** ft. Roll		470.64	299.95

BELDEN - continued

	Reg	Sale
8213 RG-11 (75 ohm, solid, foam) ....per ft.		74¢
8213 ....**100** ft. cut		64.95
8213 ....**500** ft. Roll	360.00	249.95

ROTOR CABLE

8484 4-wire; 4-20 gauge ....per ft.		29¢
8484 ....**100** ft. cut	48.00	25.95
8484 ....**500** ft. Roll	185.00	104.95
8484 ....**1000** ft. Roll	370.00	199.95
8448 8-wire; 2-18, 6-22 gauge ....per ft.		34¢
8448 ....**100** ft. cut	103.75	29.95
8448 ....**500** ft. Roll	412.50	129.95
8448 ....**1000** ft. Roll	820.00	249.95
9405 8-wire; 2-16, 6-18 gauge ....per ft.		74¢
9405 ....**100** ft. cut		69.95
9405 ....**500** ft. Roll	585.00	319.95
9405 ....**1000** ft. Roll	1167.50	599.95

ANTENNA WIRE

8000 No. 14 stranded ant wire ....per ft.		22¢
8000 ....**100** ft. Roll	30.50	18.95
8000 ....**1000** ft. Roll	275.00	169.95

No. 8 ALUMINUM GROUND WIRE

8018 Multiples of **50** ft. ....each	$ 19.00	13.95
8018 ....**500** ft. Roll	150.00	109.95

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

FOAM COAX w/PL-259s ON BOTH ENDS

9349 3' RG-58AU foam	$ 19.32	15.95
9350 15' RG-58AU foam	21.63	17.95
9352 50' RG-58AU foam	32.13	26.95
9354 50' RG-8U foam	60.90	49.95
9355 75' RG-8U foam	84.00	69.95
9356 100' RG-8U foam	101.85	84.95

BELMERIT (BLM)

DM-80 Credit card size multimeter w/case	$ 34.95	
DX-355 True RMS+20MHz freq multimeter	74.95	
DX-405 10 func/39 range+20MHz freq multimeter	69.95	

BENCHER (BEN)

BY-1 Iambic keyer paddle w/black base	$100.00	94.95
BY-2 Iambic keyer paddle w/chrome base	115.00	109.95
BY-3 Iambic keyer paddle, gold plated	325.00	279.95
BY-4 Iambic paddle/blk base/gold components	170.00	149.95
170-82 Merc paddle ..drop ship; mfgr will engrave call	495.00	449.95
ST-1 Single lever keyer paddle, black base	100.00	94.95
ST-2 Sgl lever kyr paddle, chrome base	115.00	109.95
ST-3 Single lever kyr paddle, gold plated ...D	299.95	169.95
RJ-1 Dlx hand key w/navy knob/black base	95.95	
RJ-2 Dlx hand key w/navy knob/chrome base	110.95	
XW-1 Low voltage DC fuse panel	75.95	
XW-20 Fuse kit	5.95	
XW-39/XW-30 Crimp terminal kit	3.95	
XW-40 Screw terminal kit	4.95	
YA-1 1kw low pass filter	70.95	
ZA-1A 3.5-30 MHz 1:1 balun	40.95	
HWK Hardware kit; ZA-1A for 2" boom	9.95	

BIRD (BIR)

43 Thruline Directional wattmeter, SO-239s	$276.95	
4300-400 Peak reading conversion kit	131.95	
43P Peak reading directional meter, SO-239s	416.95	
4431 Wattmeter, variable RF tap, SO-239s	487.95	
Elements (Table 1) **50H-1000H** ....each	92.95	
Elements (Table 1) **2500H, 5000H** ....each	132.95	
Elements (Table 1) 25-1000 MHz ....each	75.95	
Low-power elements (Table 2) ....each	100.95	

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SECURE web site
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BIRD - continued

TABLE 1 – Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400 1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 – Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

	Reg	Sale
CC-1 Carrying case; wattmeter/6 elements ..	48.95	
EC-1 Case for 12 elements	38.95	
80F 5w dummy load w/N female .....D	72.00	39.95
25-T-MN 50w dummy load w/type N male	100.95	
50-T-MN 50w dummy load w/type N male	145.95	
4273 1.5-35 MHz variable RF sig sampler* ..	140.95	
4273-100 HF sampler; for Bird equip install	151.95	
4275 20-1000 MHz variable RF sig sampler*	134.95	
*2 QC connectors required - not included		
4275-100 VHF sampler; for Bird equip install ..	151.95	
4304A 25-1000 MHz 500w wattmeter	545.95	

QUICK CHANGE CONNECTORS (QC)

	Reg	Sale
4240-050 UHF female (SO-239) .....each	$ 8.95	
4240-062 Type N female .....each	8.95	
4240-125 BNC female .....each	21.95	
4240-160 TNC male .....each,Δ	25.00	19.95

Other Bird items available on special order.
Sorry, no exports on Bird products.

BUCKMASTER (BUC)

	Reg	Sale
HamCall CD-ROM ham listings	$ 50.00	

BUSHNELL (BUS)

	Reg	Sale
12-1025 10x25 compact Legacy binoculars .	$188.95	119.95
13-0430 4x30 LiteVision compact binoculars	22.95	19.95
13-0721 7x21 compact Falcon binoculars	52.95	39.95
13-1226 12x25 camo FRP compact binocs ...	38.95	29.95
13-1250 12x50 wide angle Powerview binocs	86.95	59.95
13-2514 8x21 black compact binoculars	26.95	24.95
13-3410 7x35 Falcon binoculars	40.95	29.95
17-7351 7x35 wide angle armored binoculars	76.95	49.95
20-0600 Compact laser rangefinder 600	558.95	349.95
78-0040 90mm refractor telescope	995.00	439.95
78-0103 1.25" erecting prism	91.95	69.95
78-0200 4.5" reflector telescope	795.00	349.95
78-6000 6" Dobsonian reflector telescope	563.95	299.95
78-8000 8" Dobsonian reflector telescope	743.95	399.95
78-9440 60mm refractor telescope	161.95	89.95
78-9470 60mm refractor telescope w/zoom ..	227.95	129.95
78-9675 4.5" reflector telescope	421.95	229.95
78-0101 1.25" 9mm Kellner eyepc; 0040/6000/8000	45.95	29.95
78-0102 1.25" 25mm Kellner eyepiece	45.95	29.95
78-0105 1.25" 2x Barlow lens; 0040/0200/6000/8000	54.95	39.95
78-0106 DC/batt clock drive; 0040/0200/9675	143.95	89.95

BUTTERNUT (BUT)

	Reg	Sale
Skyhawk 3X10 20-15-10m 10el, 24' boom/balun	$995.00	869.95
HF-6VX 80/40/30/20/15/10m 26' vert ant	375.00	299.95
HF-9VX 80/40/30/20/17/15/12/10/6m vert ...	450.00	369.95
A17-12 17 & 12m kit for HF-6VX	60.95	
CPK Counterpoise kit	130.00	119.95
MPS Mounting post sleeve	9.95	
RMK-II Roof mounting kit w/radials	160.00	149.95
STR-II Radial kit only	120.00	109.95
TBR-160S 160m resonator	125.00	114.95
HF-2V 80/40m 32' vertical	270.00	229.95
30-MRK 30m resonator for HF-2V	100.95	
TBR-160S 160m resonator	125.00	114.95
HF-5B 2 el 20/17/15/12/10m butterfly beam	595.00	479.95
P-5 1:1 balun .....Δ	65.95	49.95

CES (CES)

	Reg	Sale
4700VP Telephone interconnect .....†	$292.00	169.95
SDI-50 Dlx splx/dplx autopatch/rptr controller	760.00	469.95

CQ (CQX)

	Reg	Sale
ARC-2000 2000 Amateur Radio Calendar	$ 9.95	
RCC-2000 2000 Radio Classics Calendar	9.95	
33 Simple Weekend Projects	15.95	
Amateur Radio Almanac	19.95	
Building and Using Baluns and Ununs	19.95	
Buyers Guide	15.95	
Contest Video Getting Started in Contesting	19.95	
DXing Video Getting Started in DXing	19.95	
Ham Sat Video Getting Started Amateur Satellites	19.95	
Ham Video Getting Started in Ham Radio	19.95	
Lew McCoy on Antennas	15.95	
Packet Radio Operator's Manual	15.95	
Packet Video Getting Started in Packet Radio	19.95	
Quad Antenna Book	15.95	
Shortwave Propagation Handbook	19.95	
Vertical Antenna Hand**book**	9.95	
VHF How To Book	15.95	
VHF Video Getting Started in VHF	19.95	
W6SAI HF Antenna Handbook	19.95	

CABLE X-PERTS (CAB)

	Reg	Sale
9913FX RG-8U (low loss, flexible) .....per ft.		87¢
9913FX .....500 ft. Roll		299.95

CASTLE RIDGE (CRO)

SOLID BASE COPPERWELD ANTENNA WIRE

	Reg	Sale
AN-122 100 feet No. 12	$ 24.95	
AN-123 150 feet No. 12	34.95	
AN-124 250 feet No. 12	49.95	
AN-126 500 feet No. 12	89.95	
AN-128 1000 feet No. 12	159.95	149.95
AN-142 100 feet No. 14	19.95	
AN-143 150 feet No. 14	24.95	
AN-144 250 feet No. 14	34.95	
AN-146 500 feet No. 14	59.95	
AN-148 1000 feet No. 14	114.95	104.95
AN-181 250 feet No. 18	14.95	
AN-182 500 feet No. 18	24.95	

CELESTRON (CEL)

	Reg	Sale
11015 Celestar 8 telescope	2098.00	1099.95
11031 Nexstar 5 telescope	2098.00	1199.95
93593 Tripod for Nexstar 5	298.00	199.95
11051 G-5 w/motor drive telescope	1398.00	749.95
21072 Firstscope 80 EQ-WA refractor telescope	550.00	299.95
31031 Firstscope 76 EQ reflector telescope ..	260.00	159.95
31034 Tabletop 76 reflector telescope	190.00	99.95
31052 Firstscope 114 Premium reflector telescope	590.00	349.95
31056 C150-HD reflector telescope	1190.00	499.95

LENSES (not for 11031 or 31034)

	Reg	Sale
93213 1.25" 2x economy Barlow lens; not ...	$ 30.00	24.95
93507 1.25" 2x deluxe Barlow lens	78.00	59.95
93340 1.25" 10mm ocular Plossl lens	78.00	59.95

CELESTRON - continued

	Reg	Sale
93342 1.25" 17mm ocular Plossl lens	78.00	59.95
93344 1.25" 26mm ocular Plossl lens	78.00	59.95
93590 Red Astro Lite flashlight	5.95	
93700 CD-ROM "The Sky for Celestron"	19.95	
93720-40 Planisphere & planet finder	9.95	
93722 Sky Map	19.95	

Sorry, no exports on Celestron products.

CENTAUR (CEN)

	Reg	Sale
B11W10-50 1:1 3kw PEP balun for dipole	$ 49.95	
B11Y10-50 1:1 3kw PEP balun for yagi	49.95	
B41Y10-50 4:1 3kw PEP balun for yagi	64.95	
B41LW10-50 4:1 ladder line to coax balun ...	64.95	

CHANNEL MASTER (CHA)

	Reg	Sale
9515 HD TV/small ham beam (VHF/UHF) rotor		129.95
9521 Prog light duty ant rotor/IR rem cont ...		99.95

CHEROKEE (CHR)

	Reg	Sale
AH-50SF 5w 6m FM HT/batt/select offset ..D	$399.95	149.95
BC-09 6 AA cell battery holder .....Δ	13.95	
BC-12 8 AA cell battery holder .....Δ	17.95	
CC-27 Leatherette case .....Δ	13.95	
DA-27 12v slide-on adapt; BC-09/NP-126 Δ	13.95	
DC-27 Drop-in nicad charger .....D	79.95	
DW-12 Wall charger .....Δ	7.95	
EX-01 Speaker/mic .....Δ	29.95	
MA-27 Mobile-com cig/ext ant adapter ...Δ	44.95	
NP-126 12v nicad battery .....Δ	69.95	
SA-5 Extended super flex 6m antenna ....Δ	24.95	
CBS-1000 SSB/AM Base CB .....D	449.95	299.95

CLOCKS

	Reg	Sale
BMI **972A** 12" 12-hour wall clock	$ 28.95	
BMI **972AD** 14" 12/24-hour wall clock	32.95	
BMI **973A** 12" 24-hour wall clock	49.95	
MFJ **105C** 24-hour quartz wall clock	19.95	
MFJ **107B** 24-hour digital clock	9.95	
MFJ **108B** 24/12-hour dual disp digital clock	19.95	
MFJ **112** Deluxe world map clock	24.95	
MFJ **114B** Giant LED desk/wall 24-hour clock	59.95	
MFJ **115** DX'er 24-hr analog world wall clock .	24.95	
MFJ **116** 24/12-hr LED clock/10 min timer	14.95	
MFJ **116DC** 12/24-hour 12vdc LED clock	19.95	
MFJ **118** Giant 24/12 hour LCD clock	24.95	
MFJ **119** Giant 24/12 hr LCD/in temp clock .D	49.95	39.95
MFJ **119B** Giant 24/12 hour LCD/in temp clock	49.95	
MFJ **120** Monster atomic (WWV) clock/temp/humd	69.95	
MFJ **125** Calendar 24-hour analog wall clock	29.95	
MFJ **126** Multi-color 12-hr quartz wall/24-hr trim	24.95	
MFJ **152** Thermo clock; in/out temp/24-hr	24.95	
MFJ **181** 24/12-hour world map wristwatch ..	39.95	
ORE **BA-812E** The weather clock	69.95	49.95
ORE **JM-818WFA** Widescreen Exactset WX clock	99.95	89.95
ORE **RM-116E** Exactset radio controlled clock	69.95	39.95

COAX SEAL (UNV)

	Reg	Sale
104 ½" x 60" coax seal	$ 2.95	

COBRA (COB)

	Reg	Sale
10 SOS Kit AM Mobile CB w/mag mt ant ....D	$ 79.95	39.95
25LTD ST Sound Tracker AM Mobile CB .....D	149.95	119.95
25LTD WX AM Mobile CB w/WX .....D	169.95	89.95
25WX ST Sound Tracker AM Mobile CB w/WX D	179.95	99.95
HH-35 AM portable CB .....D	89.95	49.95
HH-36 ST Sound Tracker handheld CB .....D	89.95	59.95
HH-70 AM remote CB .....D	149.95	79.95
146GTL SSB/AM Mobile CB .....D	329.95	139.95
10 Ultra AT AM Mobile CB w/magnet mt ant	79.95	59.95
18WX ST Sound Tracker AM Mobile CB w/WX	109.95	79.95
19DX II AM Mobile CB	69.95	49.95
19 Ultra II AM Mobile CB	69.95	49.95
21LTD ST Sound Tracker AM Mobile CB	119.95	99.95
25LTD (25LTD Classic) AM Mobile CB	129.95	89.95
25NW ST Night Watch Sound Tracker AM Mobile CB	149.95	119.95
25WXNW ST Night Watch Sound Tracker AM Mob CB/WX	179.95	129.95

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

COBRA - continued

	Reg	Sale
29LTD (29LTD Classic) AM Mobile CB	159.95	109.95
29LTD ST Sound Tracker AM Mobile CB	199.95	149.95
29NW ST Night Watch Sound Tracker AM Mobile CB	199.95	149.95
29WX ST Sound Tracker AM Mobile CB w/WX	209.95	159.95
29WXNW ST Night Watch Sound Tracker AM Mob CB/WX	209.95	159.95
HH-37 ST Sound Tracker handheld CB	89.95	69.95
HH-45WX ST Sound Tracker handheld CB w/WX	149.95	119.95
148GTL ST Sound Tracker SSB/AM Mobile CB	289.95	169.95
148NW ST Night Watch Sound Tracker SB/AM Mob CB	269.95	179.95
AT-60 Trunk lip/roof mt CB antenna .....D	19.95	14.95
AT-70 Magnet mt CB antenna	24.95	
CA-72 Amplified CB desk microphone	64.95	
CA-77 Noise canx/amplified mobile mic	24.95	
CP-912 900MHz dig sp spec cordless ph ...Δ	369.95	99.95
FRS-200 Family radio service handheld .....D	159.95	69.95

COMET (CMT)

MOBILE ANTENNAS

B-10 2m/440 2.15db 12" cell look-alike ant	$ 39.95	
B-10NMO 2m/440 2.15db 12" cell look-alike NMO	39.95	
B-20 2m/440 2.15/5db 30" cell look-alike ant	49.95	
B-20NMO 2m/440 2.15db/5db 30" cell look NMO	49.95	
CA-2X4SR 2m/440 3.8/6.2db 40" mob ant	64.95	
CA-HV 40/15/10/6/2m 5' 10" mobile ant ....D	139.95	129.95
CA-UHV 40/15/10/6/2m/440 mobile ant	149.95	139.95
L-14 20m loading coil for CA-HV/UHV	36.95	
L-18 17m loading coil for CA-HV/UHV	29.95	
CHL-28J 2m/440 3/5.5db 36" mobile ant ...D	29.95	
FL-7HA 40m 40" mobile antenna .....D	82.95	39.95
HA-4S 40/15/12/10m 4' 5" mobile ant	199.95	179.95
L-14HS 20m loading coil for HA-4S	39.95	
L-18HS 17m loading coil for HA-4S	39.95	
HA-035 80m 45" mobile antenna	82.95	
HA-050 6m 33" ¼ wave mobile antenna	72.95	
HP-32 2m/440 3/5.5db 34" 350/250w ant	89.95	
M-24B 2m/440 1.7/4.1db mag mt ant w/BNC	39.95	
M-24M 2m/440 1.7/4.1db mag ant w/PL259	39.95	
MSG-1000C 2m/440 2.15/5.5db 39" mobile	62.95	
MSG-1100C 2m/440 3.5/6db 43" mobile ant	72.95	
QE-07 40m 50" mobile antenna	82.95	
QE-14 20m 49" mobile antenna	82.95	
QE-21 15m 49" mobile antenna	82.95	
QE-28 10m 46" mobile antenna	82.95	
OP-07 40m optional element for QE ant	42.95	
OP-14 20m optional element for QE ant	42.95	
OP-21 15m optional element for QE ant	42.95	
OP-28 10m optional element for QE ant	42.95	
QE-5 2m/440 2.15/5.5db 38" quick release D	54.95	
R-2000 900MHz 5.1db 19" type N mob ant	42.95	
SBB-1 2m/440 1.5/2.15db 16" flex mobile	39.95	
SBB-1NMO 2m/440 1.5/2.15db 16" flex NMO	39.95	
SBB-2 2m/440 2.15/3.8db 18" black mobile	39.95	
SBB-2NMO 2m/440 2.15/3.8db 18" blk NMO	39.95	
SBB-5 2m/440 3/5.5db 38" black mobile ant	54.95	
SBB-5NMO 2m/440 3/5.5db 38" black NMO	54.95	
SBB-7 2m/440 4.5/7.2db 4' 7" black mob ant	74.95	
SBB-7NMO 2m/440 4.5/7.2db 4' 7" blk NMO	74.95	
SB-14 6m/2m/440 43" chrome mobile ant	64.95	
SB-15 6m/2m/440 2.15/4.5/7.2db 5' chr mob	79.95	
SBB-25 2m 4.1db black mobile antenna	44.95	
SBB-25NMO 2m 4.1db black NMO mob ant	44.95	
SB-44 440 5db 29" mobile antenna .....D	54.95	39.95
SB-83 2m/440/cell 3/6/8.4db 35" N ant .....D	68.95	
SBB-94 2m/440/1.2 black 24" N antenna	69.95	
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N	79.95	
SB-123 1.2GHz 7.2db 24" type N mobile ant	54.95	
SBB-224 2m/220/440 2.15/3.2/5.5 blk mob	74.95	
SBB-224NMO 2m/220/440 2.15/3.2/5.5 blk NMO	74.95	
SB-220MR 220 4.2db 3' 3" mobile ant .....D	49.95	39.95
SF-245 2.4 GHz 7db 18" fg type N ant	61.95	
Z-750 2m/440 2.1/5.5db 39" theft resistant	62.95	
Z-780 2m/440 4.5/7.2db 5' theft resistant	82.95	

MOBILE MOUNTS, ETC

3D4M Mobile mt, 13' coax w/UHF connectors	$ 24.95	

COMET - continued

	Reg	Sale
3D4N Mobile mt, 13' coax w/type N	28.95	
3D5M Mobile mt, 16.5' coax w/UHF connectors	27.95	
5D4N Roof mount, 13' coax w/type N	31.95	
AD-10N NMO mount to female N adapter	17.95	
AD-15M NMO mount to SO-239 adapter	17.95	
AD-25M SO-239 to NMO mount adapter	14.95	
CG-4M RS-2 gutter mount w/13.5' coax	29.95	
CK-3M Dlx 2-step 10' cable w/UHF connectors	33.95	
CK-3M5 Dlx 2-step 16.5' cable w/UHF connects	39.95	
CK-5N Dlx cable assembly w/type N	47.95	
CM-5M Hvy duty mag mt, coax, max 4' ant	24.95	
CQ-5M Dlx black QD trunk lip mt w/17' coax	66.95	
CQ-5N Dlx black QD tnk lip mt/17' coax/N	69.95	
CR-5M Std coax assy, 16.5' coax, UHF conn	19.95	
CT-5M Trunk lip mount w/16.5' coax	39.95	
GR-5M Dlx tnk lip mt w/ coax; matches SB	67.95	
GR-5N Dlx N tnk lip mt w/ coax; matches SB	69.95	
RS-2 Small gutter mount	22.95	
RS-6 Pipe clamp mount	29.95	
RS-9 Trunk lip mount, no coax	11.95	
RS-520 Mini heavy duty trunk/hatch mount	28.95	
RS-560C Luggage rack mount, no coax	35.95	
RS-720 Hatch/rear door/tnk multi-adj mt	27.95	
RS-730 HD rear van/SUV door/tnk lip mt, no coax	29.95	
RS-720NMO Hch/rear door/tnk multi-adj NMO mt	27.95	
WS-1M Window clip mt w/UHF connectors	64.95	

BASE STATION ANTENNAS

CA-350DB 10/6m 2.15/6.5db 22' 7" ant ....D	$349.95	229.95
CA-712EF 440 9db 10' 5" base antenna	119.95	109.95
CA-ABC22A 2m 6,5db 9' 5" base/rptr ant	69.95	
CA-ABC23 2m 7.8 db 13' 4" base/rptr ant	109.95	99.95
CA-F72GF 440-470 6db 3' 6" tunable ant	119.95	109.95
CA-Super22 220 6.6db 5' 11" base ant	159.95	149.95
CA-52HB4 6m 4 el 10.4db beam	129.95	119.95
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant	189.95	179.95
CYA-240 2m/440 9.5/11.6 3/5el 5.25' bm yagi	109.00	99.95
240-KT Stacking harness kit for CYA-240	69.95	
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam	149.95	139.95
DS-15 6m/2m/440/900/1.2 discone antenna	99.95	
GH-50 6m 2.15db 7' 10" fg base antenna	119.95	109.95
GP-3 2m/440 4.5/7.2db 5' 11" base/rptr ant	99.95	
GP-6 2m/440 6.5/9db 10' 2" base/rptr ant	159.95	149.95
GP-9 2m/440 8.5/11.9db 17' 8" base/rptr	199.95	179.95
GP-9N 2m/440 8.5/11.9db 17' 8" N base/rptr	199.95	179.95
GP-15 6/2m/440 3/6.2/8.6db 7' 11" base	164.95	154.95
GP-21/CA-1221S 1.2 14.8db 8' N base/rptr	159.95	149.95
GP-24 2.4GHz 12.4db 5' 11" N base/rptr	229.95	199.95
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N	139.95	129.95
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant	209.95	189.95
KP-20 900 MHz 9.2db 7' 4" type N base/rptr	121.95	112.95
PYA-913 900MHz 13el 15.8db 4' 8" type N beam	169.95	159.95
X-2427 2.4GHz 27el 21db 4'7" bm N beam	259.95	239.95

DUPLEXERS AND TRIPLEXERS

CF-142 1.3-150/200-480 600/400w UHF/leads	$ 69.95	
CF-360A 1.3-30/50-470 600w UHF w/leads	69.95	
CF-360B 1.3-30/50-470 600w UHF/common lead	69.95	
CF-413A 440/1.2 500/200w N w/leads	74.95	
CF-413B 440/1.2 500/200w N/UHF/N leads D	74.95	49.95
CF-416A 2m/440 800/500w UHF w/leads	46.95	
CF-416C 2m/440 800/500w N/UHF/N leads	49.95	
CF-416W 1.3-250/400-1400 400/200w N/leads D	69.95	59.95
CF-530 1.3-90/125-470 600w UHF w/leads	69.95	
CF-706 1.3-56/75-320 350w UHF w/leads	69.95	
CF-706A 1.3-56/75-470 350w UHF w/leads	69.95	
CF-4130A 440/1.2 500/200w N, no leads ...D	74.95	49.95
CF-4160I 2m/440 800/500w UHF/UHF/N, no leads	45.95	
CF-4160J 2m/440 800/500w SO239, no leads	53.95	
CF-4160K 2m/440 800/500w all UHF, no leads	45.95	
CFX-324A 2m/220/440 600w UHF w/leads	88.95	
CFX-324B 2m/220/440 600w UHF, no leads	85.95	
CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads D	85.95	69.95
CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads D	85.95	59.95
CFX-514 HF/2m/440 800/800/500w UHF w/leads	79.95	
CFX-514J HF/2m/440 800/800/500w UHF, no leads	74.95	

COMET - continued

	Reg	Sale
CFX-514N HF/2m/440 800/800/500w UHF/N w/leads	79.95	
CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads D	79.95	54.95
CFX-4310C 2m/440/1.2; Kenwood TM-741A/941A	79.95	
CFX-5140 HF/6m/2m/440 800/800/500w UHF, no leads	74.95	

HT AND HAND-HELD SCANNER ANTENNAS

BNC-24 2m/440 17" 2.15/5.3db BNC whip	$ 22.95	
CH-32 2m/440 1.75" BNC antenna	29.95	
CH-75 2m/440 0/3.2db 14.75" BNC ant	25.95	
CH-701X 2m/440/900 2/3.4/5.5db 19" BNC D	54.95	49.95
CY-1205BNC 1.2GHz 11db 7" BNC beam	49.95	
MH-209SMA 2m/440 3" SMA duck	23.95	
MH-510 6m/2m/440 20.75" SMA duck	37.95	
SH-55 2m/440 1.5/3.2db 15" BNC ant	33.95	
SH-95 2m/440/1.2 1.5/2.15/5.5db BNC ant	34.95	
SMA-3 2m/440 1.2/1.7db 9.75" SMA ant	39.95	
SMA-24 2m/440 17" 2.15/5.3db SMA whip	22.95	
SMA-501 2m/440/900 1.5" SMA antenna	29.95	
SMA-503 2m/440 8.75" SMA antenna	29.95	
SMA-703 2m/440/1.2GHz 6.5" SMA ant	31.95	

SWR/POWER METERS & MINIMETERS

CM-120 1240-1300 MHz type N minimeter	$ 99.95	
CM-690 1.9-60 MHz 20/150w minimeter	79.95	
CM-720 140-150/430-450 MHz minimeter	79.95	
CM-720N 140-150/430-450 type N minimeter	84.95	
CM-903 900-920 MHz type N minimeter	99.95	
EKS-3 10' rem head extension cable; CMX .D	23.95	19.95

ACCESSORIES

CS-290P 1500MHz 150w N lightning protect D	$ 39.95	24.95
CS-400P 500MHz 250w lightning protect ...D	34.95	19.95
CSP-30 Mini speaker w/magnet mt .....D	34.95	19.95
CSW-20N 0-1300MHz N coax switch .....D	99.95	49.95
HM-P2F Mini spkr/mic; Ali/Ico/Sta/Yae .....D	32.95	19.95
HM-P2K Mini spkr/mic for Kenwood .....D	32.95	19.95
HM-P4F Mini "HT" spkr/mic; Ali/Ico/Sta/etc D	32.95	19.95
HM-P4K Mini "HT" spkr/mic for Kenwood ....D	32.95	19.95

Communications Specialists (COM)

SS-64 64-tone mini prog CTCSS encoder	$ 28.95	
TE-32 32-tone CTCSS prog encoder box	49.95	
TE-64 64-tone CTCSS/burst switch enc box	79.95	
TS-64DS 64-tone CTCSS prog encoder/decoder	57.95	
DTD-1 DTMF decoder	49.95	
ID-8 Automatic morse station identifier	69.95	

CONNECTORS

AMPHENOL COAX CONNECTORS (AMP)

83-1SP-1050 Male coax plug (PL-259)	$ 1.95	
83-1SP Silver plated coax plug (PL-259)	2.95	
Van Gorden (**VAN**) **silver plated** teflon PL-259	2.99	
83-185 Reducer for RG-58 (UG-175)	.95	
83-168 Reducer; RG-59/RG-8X (UG-176)	.95	
83-1AP Right angle adaptor (UG-646)	5.95	
83-1J Double female adaptor (PL-258)	3.95	
83-1R Female chassis mt socket (SO-239)	2.95	
83-1H Hood; in-line use w/83-1R (UG-106)	4.95	
83-1T T-connector adaptor (M-358)	9.95	
83-877 Double male adaptor	10.95	
83-878 Single hole ⅝" chassis socket	2.95	
31-002 BNC male connector for RG-58	3.95	
31-012 BNC male connector; RG-59/RG-8X	4.95	
31-221 BNC female chassis socket	2.95	
82-24 Type N female chassis mt socket	4.95	
82-61 Type N male connector for RG-8	7.95	
82-64 Type N right angle adaptor	20.95	
82-202-1006 Type N male; 8214/9913/9913F	6.95	
82-209 Type N female in-line for RG-8	6.95	
34025 Type N male connector for RG-58	6.95	

AMPHENOL COAX ADAPTORS (AMP)

2900 SO-239 to BNC male adaptor	$ 9.95	
4400 SO-239 to type N male adaptor	13.95	
34125 Type N female - PL-259 adapt	20.95	
31-28 BNC female to PL-259 adaptor	11.95	
(HOU) SMA-872 SO-239 to SMA plug adaptor	5.95	

CONNECTORS - continued

	Reg	Sale
AIM CONNECTORS, PLUGS & ADAPTORS (AIM)		
19-1289 8-pin female mic plug	$ 4.95	
25-7351 Chassis mt SO-239 double female	3.95	
25-7365 BNC female to SO-239	3.95	
25-7420 BNC male to SO-239	2.95	
26-8010 Type N double female	3.95	
26-8011 Type N chassis mount	2.95	
26-8015 N male to SO-239	4.95	
26-8016 BNC female to N male	4.95	
26-8017 BNC male to N female	4.95	
27-8120 BNC female to PL-259	2.95	
27-8130 BNC double male	3.95	
27-8140 BNC T; 2 female, 1 male	2.95	
27-8142 BNC T, 3 male Δ	6.40	69¢
27-8450 BNC chassis mt, 4 screw holes	2.95	
27-8460 ⅜" hole BNC chassis mt	1.95	
27-8470 Dual BNC chassis mount	3.95	
29-3855 BNC female to SMA male	3.95	
29-4120 "T" 1 male, 2 female Δ	4.95	99¢
29-4140 SO-239 to mini PL-259	2.95	
CONNECTORS UNLIMITED (CON)		
306 SO-239 to BNC male adaptor Δ	$ 2.76	99¢
1721 7-pin DIN plug Δ	1.38	29¢
Switchcraft 1/4 " Plugs w/Solder Terminals (SWI)		
220 2-cond, plastic, screw terms, rt ang plug D	$ 5.95	2.95
237 3-cond, plastic handle, rt angle plug Δ	5.15	49¢
250 2-conductor, plastic handle Δ	3.90	1.95
260 3-conductor w/screw terminals Δ	6.95	2.95
267 3-conductor, plastic handle Δ	5.50	1.95
280 2-conductor, metal handle	4.95	
297 3-conductor, metal handle	6.95	
SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)		
3501MC Phono plug with cable clamps Δ	$ .95	49¢
3502 Shielded phono plug	2.95	
3507 RF-type phono plug Δ	3.95	2.95
VANCO MICROPHONE CONNECTORS (VCO)		
CBC-2 2-pin female mic plug	$ 3.95	
CBC-3 3-pin female mic plug	2.95	
CBC-4 4-pin female mic plug	4.95	
CBC-4P Panel mt 4-pin male	2.95	
CBC-5 5-pin female mic plug	3.95	
CBC-5P Panel mt 5-pin male	2.95	
CBC-6 6-pin female mic plug	4.95	
CBC-6P Panel mt 6-pin male	3.95	
(AIM) **19-1289** 8-pin female mic plug	4.95	
CBC-8P Panel mt 8-pin male	5.95	
KENWOOD DIN PLUGS (KEN)		
7-pin DIN plug	$ 4.95	
8-pin DIN plug	6.95	
13-pin DIN plug	9.95	
VANCO MINI PHONE & CIG PLUGS (VCO)		
P-25 2.5mm sub-miniature phone plug	$ .99	
P-35 3.5mm miniature phone plug	.99	
P-12R 2-contact cigarette plug	1.95	
P-12V Cig lighter plug w/leads	2.95	
P-212 2-outlet cigarette plug adapter	6.95	
P-212B Dual cigarette lighter socket adapter	9.95	

Connect Systems (CSY)

CS-700 Simplex interconnect D	$485.00	199.95
CS-800 Full duplex patch & repeater controller	485.00	359.95
CS-900 Simplex interconnect	485.00	359.95
CD-2 DTMF/CTCSS/DCS decoder unit/RS-232	284.00	249.95
CD-2P PC application program for CD-2	113.00	99.95
LT-2P PC application program for LT-2 Δ	113.00	29.95

COUGAR (CUG)

H-83 AM/FM/SW mini receiver Δ		24.95

COURIER (COU)

Procom 2w VHF FM hand-held/batt/cgr Δ	$199.95	99.95
M-54 5w 4ch VHF hand-held/batt/cgr/151.625	299.95	199.95
DIC-V 3-hour quick charger for M-54 Δ	69.95	29.95

COURIER- continued

	Reg	Sale
M-510 5w 10ch synth VHF FM hand-held	399.95	269.95
MU-510 5w 10ch synth UHF FM hand-held	439.95	299.95
CCK-510 Cloning cable for M-510/MU-510	18.95	
CPK-510 Prog kit for M-510/MU-510	224.95	199.95

COYNE (COY)

MacHam General Δ	$ 34.95	9.95
MacHam Advanced Δ	34.95	14.95
MacHam Extra Δ	34.95	14.95
MacHam Radio Morse Code training soft Δ	39.95	14.95

CROSS DEVICE (CRS)

STUF Coax connector waterproofing filler	$ 4.95	

CUSHCRAFT (CUS)

VHF/UHF FM BEAMS* (Vertical polarization)		
A148-3S 2m, 3 el wideband beam	$ 52.95	
A148-10S 2m, 10 el wideband beam	94.44	89.95
A148-20S 2 A148-10S vert stacked	258.89	199.95
A449-6S 440 MHz, 6 el, 3' boom, 10 db	50.95	
A449-11S 440 MHz, 11 el, 4.5' boom, 13 db	76.67	69.95
*These antennas can be mounted vertically or horizontally!		
DUAL-BAND 2M/440 FM BEAMS* (Vert polarization)		
A270-6S 2m/440, 3/3 el, 2.8' boom, 7.8 db	$ 78.95	69.95
A270-10S 2m/440, 5/5 el, 6.17' boom, 10 db	104.21	94.95
*These antennas can be mounted vertically or horizontally!		
TRI-BAND 6M/2M/440 BEAM		
A6270-13S 6m/2m/440, 3/5/5el, 8.66'bm, 8/10/10db	$222.46	169.95
FM VERTICAL STACKING KIT* (Adds 3 db)		
A14-SK Harness only for 2 A148-3S D	$ 48.00	9.95
*Price is for stacking kit only		
FM RINGOS - 1/2 Wave Verticals - 3.75 db		
AR-10 10m FM Ringo, 1000w	$ 89.47	79.95
AR-6 6m FM, 1000w	74.74	69.95
AR-2 2m FM, 1000w	52.63	49.95
AR-450 440 MHz FM, 500w	36.95	
RINGO RANGERS - FM Verticals - 6 db		
ARX-6 6m FM Ringo Ranger D	$259.00	179.95
ARX-2 2m FM Ringo Ranger	63.16	59.95
ARX-2B 2m FM Ringo Ranger II, 1000w	76.84	69.95
ARX-220B 220 FM Ringo Ranger II, 500w	76.84	69.95
ARX-450B 440 FM Ringo Ranger II, 500w	76.84	69.95
DUAL-BAND 2M/440 FM VERTICALS		
AR-270 2m/440 MHz FM, 250w, 3.7/5.5db	$ 92.63	84.95
AR-270B 2m/440 MHz FM base ant	134.74	109.95
ARX-270N 2m/440 9/12 db fg type N ant D	310.00	199.95
ARX-270U 2m/440 9/12 db fg SO-239 ant D	310.00	199.95
TWIST, OSCAR BEAMS (Horiz/Vert Polarization)		
A148-20T 2m 20el 10.8'bm 11.1db twist	$147.78	119.95
719B 432 19 el beam	157.78	129.95
729B 432 29 el beam	250.00	199.95
BOOMER ANTENNAS		
617-6B 6m Boomer, 6 el, 34' boom, 14 db	$483.33	369.95
124WB 2m Boomer, 4 el, 4' boom, 10.2 db	81.11	74.95
13B2 2m Boomer, 13 el, 15' boom, 15.8 db	157.78	129.95
17B2 2m Boomer, 17 el, 31' boom, 18 db	273.33	219.95
26B2 2 13B2s vertically stacked	451.11	339.95
224WB 220 Boomer, 4 el, 3' boom, 10.2db	65.56	59.95
225WB 220 wideband Boom, 15el, 10'bm, 15.5db	170.00	139.95
BOOMER STACKING KITS*		
617-SK Harness, pwr divider; 2 6176Bs D	$160.00	49.95
22-SK Harness, power divider; 2 13B2s	111.11	99.95
22N-SK Harness, pwr divider; 2 17B2s	183.33	149.95
26B2-VPK Vertical polar kit; 2 13B2s	194.44	159.95
PD-2 Power divider for 2 13B2s	55.95	
PD-4 Power divider for 4 13B2s	70.00	64.95
PD-4N Power divider for 4 17B2s D	113.00	69.95
*Prices are for stacking kits only		
VHF/UHF BEAMS* (Horizontal polarization)		
A50-3S 6m, 3 el, 6' boom, 8 db, stainless hdwre	$110.00	99.95
A50-5S 6m, 5 el, 12' boom, 10 db, stainless hdwre	182.00	149.95
A50-6S 6m, 6 el, 20' boom, 11db, stainless hdwre	304.00	249.95
A148-10S 2m, 10 el wideband beam	94.44	89.95

CUSHCRAFT - continued

	Reg	Sale
A430-11S 430 MHz, 11 el, 4' boom, 13 db	76.67	69.95
*These antennas can be mounted vertically or horizontally!		
MOBILE ANTENNAS		
CG-144A 2m ⅜" mt Gold series coil/whip only D	$114.00	69.95
CS-28M 10m magnet mt antenna	69.47	64.95
CS-50M 6m magnet mt 3 db antenna	69.47	64.95
CS-147M 2m magnet mt 3 db antenna	69.47	64.95
CS-147A 2m coil & whip only	46.95	
CS-220 220 ¾" hole mt 3 db antenna D	55.00	24.95
CS-220M 220 magnet mt 3 db antenna	69.47	64.95
CS-220T 220 trunk lip mt 3 db ant D	64.00	24.95
CS-450 440 ¾" hole mt 5 db antenna D	55.00	29.95
CS-450M 440 magnet mt 5 db antenna	69.47	64.95
CS-450T 440 trunk lip mt 5 db ant D	64.00	34.95
CS-450A 440 coil & whip only D	43.00	14.95
DUAL-BAND 2M/440 MOBILE ANTENNAS		
CS-270M 2m/440 3.7/6 db magnet mt ant	$ 91.58	84.95
CS-270A 2m/440 coil & whip only	63.16	59.95
MOUNTS ONLY FOR MOBILE ANTENNAS		
CG-MGN Gold series mag mt/N connector D	$ 35.95	19.95
CS-MG Magnetic mount	30.95	
CS-MGN Magnetic mount w/N connector	35.95	
CS-TL Trunk lip mount	30.95	
MULTIBAND VERTICAL ANTENNAS		
R-6000 20/17/15/12/10/6m vertical	$365.00	269.95
R-7000 40/30/20/17/15/12/10m vertical	510.00	379.95
R-80 80m kit for R-7000	172.22	139.95
ROTATABLE DIPOLES		
D-3 20/15/10m World Ranger dipole	$263.16	199.95
D-3W 30/17/12m rotatable dipole	263.16	199.95
D-4 40/20/15/10m World Ranger dipole	357.89	289.95
D-40 40m World Ranger dipole	321.05	249.95
BIG THUNDER TRI-BAND BEAMS		
X-9 20/15/10m, 9 el, 28' boom, 13/14db	1163.75	869.95
X-940 40m 1 element add-on kit for X-9	321.64	269.95
X-7 20/15/10m, 7 el, 18' boom, 12.5/13db	789.47	599.95
X-740 40m add-on kit for X-7	321.64	269.95
BIG THUNDER MONOBAND BEAMS		
XM-240 40m, 2 el, 23' boom, 7 db	$840.93	599.95
XM-520 20m, 5 el, 35' boom, 9.3db	922.81	649.95
XM-515 15m, 5 el, 24' boom, 9.3db	525.14	399.95
XM-510 10m, 5 el, 19' boom, 9.3db	384.80	299.95
TEN-3 10m, 3 el, 8' boom, 8 db	221.06	169.95
MULTIBAND BEAM ANTENNAS		
A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwr	$523.16	369.95
A-743 40m or 10 MHz add-on kit; A-3/A-3S	167.37	139.95
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	628.42	449.95
A-744 40m or 10 MHz add-on kit; A-4/A-4S	167.37	139.95
A-3WS 17 & 12m, 3 el, 14' boom, 8 db	410.53	299.95
A-103 30m add-on kit for A-3WS	167.37	139.95
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP	871.58	619.95
MA-5B 20/17/15/12/10m 7.3' boom mini beam	365.80	269.95
LIGHTNING ARRESTORS		
LAC-4 200w SO-239 gas tube arrestor	$ 40.95	
LAC-4H 2kw SO-239 gas tube arrestor	45.95	
LAC-4N 200w type N gas tube arrestor	52.95	
LAC-4NH 2kw type N gas tube arrestor	56.95	
LC-2 Extra 200w cartridge for LAC-4/4N	17.95	
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	20.95	
5VB Vinyl connector boots pack of 5	15.95	

CUTTING EDGE (CUT)

HMP WorldPack backpack; mini HF Xcvr	$ 57.95	
HPP-7A 7AH gel-cell w/overnight charger	63.95	
HP-7AF 7AH gel-cell w/2.5 hr fast charger	119.95	
PPMMDC Multi-tip/volt reg DC-DC adapt	22.95	
PPSC-5 5.5w roll-up solar cell	129.95	
PPSC-32 32w roll-up solar cell	394.95	
PPSCA Solar cell cigarette adapter	10.95	
PPVT Digital voltage tester D	16.95	

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	Reg	Sale
DCI (DCI)		
145-2H 2m 144-146MHz 200w bandpass filter	$ 89.95	
146-4H 2m 144-148MHz 200w bandpass filter	89.95	
223.5-3H 222-225MHz 200w bandpass filter	89.95	
2m/220 models w/N connectors add $10 special order		
435-10C 430-440MHz 200w N bandpass filt	109.95	
445-10C 440-450MHz 200w N bandpass filt	109.95	
DC SALES (DCS)		
Tenna Hitch Antenna mount for trailer hitch	$ 35.95	
DAIWA (DAI)		
CN-101 1.8-150MHz SWR/power meter/light	$109.95	99.95
CN-103M 140-525MHz SWR/power meter	109.95	99.95
CN-410M 3.5-150MHz 15/150w mob meter	134.95	124.95
CN-460M 140-450MHz 15/150w mob meter	134.95	124.95
CS-201 2-position 600 MHz coax switch	26.95	
CS-401 4-position 800 MHz coax switch	169.95	149.95
DAVIS (DAV)		
7400 Perception II indoor WX unit	$150.00	129.95
7415 Wizard II-S weather station ....D	150.00	129.95
7425 Wizard III weather station	195.00	169.95
7440 Monitor II weather station	395.00	349.95
7852 Rain Collector II, 0.01"	75.00	69.95
7977 Electronic rain counter, 0.01" ....D	30.95	19.95
7859 External temp/humd Sensor II; 7440	125.00	109.95
7862 Weatherlink Win interface/software	165.00	139.95
7866 Weatherlink Mac interface/software	165.00	139.95
7870 Modem adapter for 7862/7866	7.95	
7867 Weatherlink Mac to Win conv kit	50.95	
7868 Weatherlink Win to Mac conv kit	50.95	
7873 Cig lighter power cord	9.95	
7876-040 4-conductor 40' extension cable	18.95	
7878-040 6-conductor 40' extension cable	22.95	
7880 8-conductor 25' junction box cable	15.95	
7881 8-conductor 50' junction box cable	25.95	
7882 8-conductor 100' junction box cable	45.95	
7890 Mast mount for anemometer	16.95	
0131 Weather forecasting quick reference card	9.95	
0271 Turbo Meter handheld dig wind indicator	165.00	99.95
0281 Wind Wizard handheld wind indicator	46.95	
7520 Stand alone 0.01" rain gauge/elec ctr D	95.00	39.95
DELORME (DEL)		
Topo USA US topographical maps CD-ROM	$ 99.95	
Earthmate Laptop PC GPS/Street Atlas soft	159.95	
DIAMOND (DIA)		
SWR/POWER METERS		
SX-20C HF/6m/2m 30/300w meter	$ 89.95	
SX-40C 144-470 (220 w/correction) 15/150w	79.95	
SX-100 1.6-60 MHz 30/300/3kw PEP meter	144.95	134.95
SX-200 1.8-200 MHz 5/20/200w PEP meter	104.95	94.95
SX-400 140-525 MHz 5/20/200w PEP meter	124.95	114.95
SX-600 Dual band 1.8-160 /140-525 200w PEP mtr	179.95	169.95
SX-1000 1.8-160/430-1300MHz 200w PEP meter	234.95	214.95
HT & HANDHELD SCANNER ANTENNAS		
RH-3 2m/440 1.75" BNC mini HT duck	$ 24.95	
RH-77CA 2m/440 15" BNC rubber gain ant	24.95	
RH-205 2m ⅝ wave telescopic HT antenna	24.95	
RH-519 2m/440 8.3" flexible BNC whip	27.95	
RH-707 2m/440 8¼" tiltable BNC whip	33.95	
RH-951S 2m/440/1.2GHz 15" BNC slim duck	44.95	
SRH-519 2m/440 8.3" flexible SMA whip	32.95	
SRH-805 2m/440/1.2GHz 1.75" SMA ant	27.95	
SRH-815 2m/440/1.2GHz 6" flex SMA whip	36.95	
MONO-BAND MOBILE ANTENNAS		
NR-2C 2m 4.1db 55.5" mobile antenna	$ 39.95	
NR-124 1.2GHz 8.4db 25" type N mobile ant	59.95	
NR-140A 220 4db 37" mobile antenna	53.95	
SG-2000HD 2m 5.2db 62.6" 250w mob ant	89.95	
SG-6000NMO 52-54 2.15db 39" NMO mob	64.95	

DIAMOND - continued	Reg	Sale
DUAL-BAND MOBILE ANTENNAS		
CR-214S 2m/220 2.1/3.4db 37" mobile ant	$ 58.95	
CR-224A 2m/220 5/6db 69" mobile antenna	109.95	99.95
NR-72BNMO Black 2m/440 2.15db 14" NMO	41.95	
NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	57.95	
NR-770HA 2m/440 3/5.5db 40" mobile ant	56.95	
NR-770HB Black 2m/440 3/5.5db 40" mobile	59.95	
NR-770HNMO 2m/440 3/5.5db 40" NMO mobile	56.95	
NR-770HBNMO Blk 2m/440 3/5.5db 40" NMO	59.95	
NR-770RA 2m/440 3/5.5db 39" mobile ant	51.95	
NR-770SA 2m/440 2.15db 16.5" mobile ant	41.95	
NR-790A 2m/440 4.5/7.2db 57" mob ant ...D	82.95	
SG-7000A 2m/440 2.15/3.8db 19" mobile	69.95	
SG-7200NMO 2m/440 3.2/5.7db 38" NMO ant	86.95	
SG-7500A 2m/440 3.5/6db 41" mobile ant	79.95	
SG-7500NMO 2m/440 3.5/6db 41" NMO ant	79.95	
SG-7900A 2m/440 5/7.6db 62" mobile ant	124.95	114.95
TRI-BAND MOBILE ANTENNAS		
CR-320A 2m/220/440 2.15/3.8/5.5db 36"	$ 89.95	
CR-627B 6m/2m/440 2.15/4.5/7.2db 60" ant	109.95	99.95
CR-627BNMO 6m/2m/440 2.15/4.5/7.2db 60"	109.95	99.95
MV-3A 10/6/2m 57" UHF base mobile ant	84.95	
HV-7A 10/6/2m/440 54" UHF base mobile ant	119.95	109.95
HVC-7 40m loading coil for MV-3A	39.95	
HVC-14 20m loading coil for MV-3A	37.95	
HVC-18 17m loading coil for MV-3A	37.95	
HVC-21 15m loading coil for MV-3A	27.95	
NR-2000NA 2m/440/1.2 3/6/9.7db 39" N mob	89.95	
SG-9600 6m/2m/440 2.1/2.15/5.2db 33" ant	92.95	
D-505 Mobile 40-1500MHz 20db receive ant	119.95	
MAGNET MOUNTS		
DPK-4NM-M Hvy mag mt, Yaesu N, 45" max	$ 45.95	
DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max	45.95	
K-702M Hvy duty mag mt, 6⅜" dia, 50" max	49.95	
MCR-M Mag mt HT base/coax/tilt BNC .....D	44.95	24.95
SPM-35 Hvy duty mag mt, cable, 45" max	39.95	
SPM-NMO Hvy dty NMO mag mt, cbl, 45" max	44.95	
TRUNK LIP MOUNTING KITS		
K-200 Folding hatch/tnk mt; NR/SG ants	$ 34.95	
K-200KM Folding hatch/tnk mt/coax; NR/SG	62.95	
K-400 Hatch/trunk mt; NR/SG antennas	39.95	
K-400C Hatch/trunk mt w/coax; UHF mount	69.95	
K-400CNMO Hatch/trunk mt w/coax; NMO mt	69.95	
K-400-3/8C Trunk mount w/6' cable; ⅜-24	69.95	
C-110 10' extension cable for K-400-3/8C	14.95	
K-400N Hatch/trunk mt w/coax & type N	74.95	
K-600M Tilt angle trunk mt w/cable	57.95	
K-600P Tilt angle trunk mt w/cable, Yae N .D	64.95	59.95
K-601M SO-239 hideaway trunk mt, 6' coax	69.95	
K-601NMO NMO hideaway trunk mt, 6' coax	69.95	
C-110 10' extension cable for K-601 mts	14.95	
K-9000LRM Motorized luggage rack mount	109.95	
K-9000TM Motorized trunk/hatchback mt	109.95	
GUTTER MOUNTS & KITS		
K-300 Folding gutter mt; NR/SG antennas	$ 39.95	
K-300C Gutter mt w/cable; UHF mount	69.95	
K-300KM Folding gutter mt w/coax; NR/SG	67.95	
MIRROR & LUGGAGE RACK MOUNTS & KITS		
K-540 Mirror/luggage rack mount	$ 35.95	
K-540KM Mirror/luggage rack mt w/coax	59.95	
K-550 Luggage mt; new mini vans (use GLP)	44.95	
K-550KM Luggage mt w/SO-239 base/coax	69.95	
MOUNTING GROUP HARDWARE		
C-101 SO-239 mt, 6.5' RG-316 low-loss coax	$ 29.95	
C-101NMO NMO mt, 6.5' RG-316 low-loss coax	29.95	
C-110 10' ext cable; C-101/K-601/K-400-3/8C	14.95	
C-110BNC 10' extension cable to BNC male	22.95	
C-211 SO-239 mt, 6.5' coax, 10' coax entend	39.95	
C-213 SO-239 mt, 13.5' RG-316 low-loss coax	37.95	
C-213NMO NMO mt, 13.5' RG-316 low-loss coax	37.95	
GLP-5 UHF base mtg group hrdwr; mini coax	10.95	
GLP-5N UHF mtg grp hrdwr; mini coax, Yae N	13.95	

DIAMOND - continued	Reg	Sale
GLP-58 UHF base mounting group hardware	10.95	
NMO-UHF Adapter to NMO; not for SG, 45" max	17.95	
MULTIBAND HF BASE VERTICAL ANTENNAS		
CP-5 80/40/20/15/10m 200w PEP 15' vert	$309.95	279.95
CP-6 80/40/20/15/10/6m 200w PEP 15' vert	329.95	299.95
MONO-BAND BASE STATION ANTENNAS		
CP-22E 2m 6.5db 9' base antenna	$ 59.95	
DP-GH62 6m 6db 21' base antenna	157.95	147.95
F-22A 2m 6.7db 10.5' base antenna	99.95	
F-22J 143.5-146.5MHz 6.7db 10.5' base ant	109.95	99.95
F-23A 2m 7.8db 15' base antenna	137.95	127.95
F-23C1 148-154MHz 7.8db 15' comm base	183.95	173.95
F-23J 143.5-146.5MHz 7.8db 15' base ant	172.95	159.95
F-142A 220 MHz 5.5db 6' base antenna	132.95	122.95
F-718A 440 11.5db 15' type N base antenna	229.95	209.95
F-718L 420-430MHz 11.5db ATV N base ant	239.95	219.95
F-1230A 1.2GHz 13.5db 10.5' type N base ant	169.95	159.95
DUAL-BAND BASE STATION ANTENNAS		
U-200 440/1.2GHz 8.3/11.7db 6' N base ant	$139.95	129.95
X-50A 2m/440 4.5/7.2db 5.6' base antenna	109.95	99.95
X-50NA 2m/440 4.5/7.2db 5.6' base N ant	109.95	99.95
X-200A 2m/440 6/8db 8.3' base antenna	149.95	139.95
X-300A 2m/440 6.5/9db 10.2' base ant	174.95	164.95
X-500HNA Hvy duty 2m/440 8.3/11.7db 17.8' N ant	259.95	239.95
X-510MA 2m/440 8.3/11.7db 17.2' base ant	209.95	189.95
X-510NA 2m/440 8.3/11.7db 17.2' type N ant	209.95	189.95
X-510NJ 143.5-146.5/428-442MHz 17.2' N	219.95	199.95
X-700HNA 2m/440 9.3/13db 24' type N ant	439.95	399.95
X-2200A 2m/220 6/7.8db 11.5' base ant	183.95	173.95
TRI-BAND BASE STATION ANTENNAS		
D-130J 25-1300 MHz 200w discone ant	$ 89.95	
U-5000A 2m/440/1.2GHz 4.5/8.3/11.7db 6' N	149.95	139.95
V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3'	172.95	162.95
X-3200A 2m/220/440 6/7.8/8db 10' base	229.95	209.95
X-6000A 2m/440/1.2 6.5/9/10db 10.5' N	219.95	199.95
D-707E Base 40-1500MHz 20db receive ant	179.95	
DUPLEXERS & TRIPLEXERS		
MX-37 HF-440/1.2 100/50w N duplexer	$ 64.95	
MX-62M HF-6m &2m/440, 12" cables dplxr	74.95	
MX-72D HF-2m/440 400/150/100w duplexer	43.95	
MX-72H As MX-72D, w/12" cables	46.95	
MX-72N As MX-72D, type N on 440, 12" cables	49.95	
MX-214 2m/220 150/100w w/12" cables	69.95	
MX-214D As MX-214, no cables	69.95	
MX-324 2m/220/440 triplexer	99.95	
MX-324D As MX-324, no cables	99.95	
MX-2000 HF-6m/2m/440 400/400/250w triplexer	84.95	
MX-2000D As MX-2000, no cables	79.95	
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	79.95	
MX-3000D As MX-3000, no cables	79.95	
MX-3000N As MX-3000, type N, 12" cables	85.95	
ACCESSORIES		
CA-35R DC-500MHz 400w lightning protect	$ 29.95	
CX-210A 1.5kw DC-1000MHz coax switch	44.95	
CX-210N 1.5kw DC-1500MHz N coax switch	74.95	
CX-310A HD 3-pos DC-800MHz coax switch	83.95	
DL-30A 15/100w peak 0-500MHz dummy load	27.95	
DL-30N 15/100w peak 0-500MHz N dummy load	39.95	
GZV-4000 Variable 40A switching ps/meter/spkr	229.95	199.95
HB-300 Remote head mount for Xcvr .....D	59.95	
HB-400 HT air vent dash mount	19.95	
HB-450 HT adjustable air vent dash mount D	54.95	39.95
HB-500 Remote head air vent dash mount	22.95	
HB-650 HT door mt; side wind/glv bx .....D	69.95	39.95
Diamond Systems (DSY)		
DSI-IBM-N Novice Class License software .Δ	$ 49.95	19.95
DSI-IBM-T Technician Class License soft ....Δ	44.95	19.95
DSI-IBM-NC No Code Tech Class License soft Δ	59.95	24.95
DSI-IBM-A Advanced Class License soft ....Δ	59.95	24.95
DIGIMAX (DIG)		
B-12 Dry cell holder, switch; D-612 .....D	$ 10.95	1.95

DIGIMAX - continued

	Reg	Sale
BAC-5 Nicad pack; D-500/D-510A .....D	29.95	4.95
BAC-12 Nicad pack; D-612/D-1200 .....D	34.95	4.95
T-1200 21" BNC telescopic antenna .....D	8.95	2.95

DRAKE (DRA)

TR-270 25w 2m FM Xcvr/ps/440 rcvr/TTP	$599.95	549.95
DEMOD-270 Multimode demodulator kit	99.95	
TNC-270 9600 bps terminal node controller	249.95	
R-8B Shortwave receiver	1199.95	
MS-8 1592 Speaker	49.95	
1590 35-55, 108-174 MHz VHF converter ..	219.95	
7852 R-8B technical manual	39.95	
1591 Interface computer soft; original R-8 ..D	59.00	9.95
SW-8 Shortwave receiver	799.95	
1595 Carrying case for SW-8	49.95	
SW-1 Shortwave receiver .....D	299.95	
SW-2 Shortwave receiver .....D	499.95	
MS-8 1592 Speaker for SW-2	49.95	
1334 Mobile mount kit for SW-1/SW-2	15.95	
1594 Remote control for SW-2	49.95	
2051 Tilt/carry handle for SW-1/SW-2	4.95	

EASY-UP (UPS OK) (EAS)

EZ 29-24 Double strap chimney mount	$ 12.95	
EZ 48-3ABX 3' boxed tripod w/pitch pad kit .	24.95	
EZ 48-5ABX 5' boxed tripod w/pitch pad kit .	34.95	

EDCO (EDC)

TX-146 2m 50w 40db 3-stage helical filt ...D	$ 89.95	24.95

EMERSON (EME)

EAN-3400 HDTV digital-ready amp omni TV ant	$ 99.95	49.95
ESR-220 Solar/dynamo AM/FM radio/flashlight .	59.95	29.95
ETA-333 Dual voltage foreign travel converter kit	39.95	19.95
EVO-6500 900MHz wireless vid obs sys/5" mon	299.95	169.95
RP-001 12-function mini stainless multi tool	19.99	6.95
RP-003 12-function stainless multi tool	19.99	6.95
RP-005 6-func flashing safety strobe/reflector	19.99	6.95

FORBES GROUP (FOR)

VT-14 2m Ventenna 3' 2.6 db base ant	$ 49.95
VT-15S Scanner Ventenna 3' 2.6 db base	49.95
VT-22 220 Ventenna 25" 2.6 db base ant	49.95
VT-27 2m/440 Ventenna base antenna	74.95
VT-44 440 Ventenna 14" 2.6 db base ant	49.95

FREEPLAY (BAY)

FPR-1B AM/FM/5.8-18SW 30min Freeplay radio Δ	$ 99.95	69.95
SWL Antenna/FPA-7 Indoor SW antenna	19.95	
FPR-2 AM/FM 60 minute Freeplay radio	69.95	
FPR-2SC AM/FM/solar clear case Freeplay ...	79.95	
FPR-2SM AM/FM/solar gray case Freeplay	79.95	
FPR-2SGSW AM/FM/5-18SW/solar 60min Freeplay	99.95	
AC Adapter/FPA-3 For FPR-2 series radio ..	10.95	
Headphones/FPA-1 For FPR-2 series radio	14.95	
S360-C AM/FM/solar clear case 15 hour Freeplay	69.95	
S360-BL AM/FM/solar trans blue 15 hr Freeplay	69.95	
FP-SL Self powered Freeplay lantern	69.95	
Bulb/FPA-11 2-pack replacement bulbs	7.95	
FPS-10/FPA-10 Patch cord for 3V output ..	6.95	

Gamber-Johnson (GAM)

SS-100 Super slide mount w/ant plug	$ 99.00	79.95
SS-101 Extra base for SS-100	44.95	

GAP VERTICALS (GAP)

DX-VIII Challenger 75*/40/20/15/12/10/6/2m 31.5'	$279.95
*80m CW w/capacitor exchange from GAP	
Challenger Counterpoise	25.95
(SYN) **100'** 3/32" black double braided rope ..	6.95
DX-VI Eagle 40/20/17/15/12/10m 21.5' rigid	289.95
DX-IV Voyager 160/80/40/20m 45'; use 350' guy	399.95
Voyager Counterpoise	50.95
(SYN) **350'** 3/16" black double braided rope ..	39.95
Titan DX 75*/40/30/20/17/15/12/10m, 25' ..	319.95
*80m CW w/capacitor exchange from GAP	

GAP - continued

	Reg	Sale
100' Guy Kit with clamp	14.95	
200' Guy Kit with clamp	22.95	
Ground Mount Quick tilt mt for vertical ant .	69.95	
Ladder Mount Quick tilt mt; campers/RVs	69.95	

GARMIN (GAR)

GPS-12CX Color GPS receiver	$386.35	269.95
GPS-12XL GPS receiver	309.07	219.95
GPS-III GPS handheld mapping unit .....D	463.62	299.95
GPS-III Plus GPS handheld mapping unit	571.80	369.95
GA-26C Low prof rem ant/cbl; GPSIII/III Plus	99.98	89.95
010-10048-00 Mounting bracket; 12CX/XL .	31.95	
010-10082-00 Power/data cable	27.95	
010-10085-00 Cig lighter adapter cable ...	23.95	
010-10111-00 Mtg bkt; GPS-III/III Plus	31.95	
010-10117-01 Carying case	12.95	
010-10141-00 PC interface cable	38.95	
010-10165-00 PC cable w/cig adapter	45.95	
010-10215-00 MapSource US CD;GPS-III Plus	99.99	
010-10084-00 Cig adapter; GPS38 .....Δ	39.95	24.95
StreetPilot 12 ch GPS receiver	636.35	469.95
GA-26C Low prof remote ant w/cable	99.98	89.95
010-10082-00 Power/data cable	27.95	
010-10085-00 Cig lighter adapter	23.95	
010-10141-00 PC interface cable	38.95	
010-10165-00 PC cable w/cig adapter	45.95	
010-10199-03 Carrying case	24.95	
eMAP Deluxe GPS/maping/8MB datacard/PC cbl	209.99	
NavTalk Analog cellular phone/GPS combo ...	424.99	399.95
010-10215-00 MapSource US road&rec CD	99.99	

GENESYS (GEN)

B-35 2m/440 15" duck .....Δ	$ 27.95	9.95
QS-110 Spkr/mic; Alinco/Icom/Yaesu .....Δ	29.95	9.95
QS-110K Speaker/mic for Kenwood .....Δ	29.95	6.95
RS-402 5/20/200w 125-525 SWR/pwr .....Δ	139.95	49.95
T-05 Throat mic with split plugs .....Δ	84.95	19.95
T-05K Throat mic for Kenwood .....Δ	84.95	14.95

GLEN MARTIN (GME)

ROOF TOPS

RT-424 4.5' roof-top tower, 6 sq ft	$162.95
RT-832 8' roof-top tower, 8 sq ft	234.95
RT-936 9' roof-top tower, 18 sq ft	394.95
RT-1832 17.5' roof-top tower, 12 sq ft	528.95
MC-10 Mast clamp; 2 required	24.95
TB-25 Thrust bearing (2 sealed bearings) .	89.95
LB-3755 Set of 8 3/8 x 5" lag bolts	9.95
EL-3755 Set of 8 concrete L bolts	14.95
RA-6024 24" side arm for roof tower	41.95
RA-6048 48" side arm for roof tower	53.95

TOWERS

M-1330A 30' alum tower 12 sq ft w/Hazer ..T	1615.95
M-1340A 40' alum tower 12 sq ft w/Hazer ..T	1832.95
M-1350A 50' alum tower 12 sq ft w/Hazer ..T	2070.95
M-1840A 40' alum tower 16 sq ft w/Hazer ..T	2150.95
M-1850A 50' alum tower 16 sq ft w/Hazer .T	2410.95
M-1860A 60' alum tower 16 sq ft w/Hazer ..T	3356.95
M-1870A 70' alum tower 16 sq ft w/Hazer ..T	3660.95
ML-1800 Messenger line kit; GME towers	70.95
KB-1000 57" side arm; M-13 series	81.95
KB-1300 57" side arm; M-18 series	83.95
M-2280 80' galv steel tower 34 sq ft w/Hazer T	11695.95
M-2210 100' galv steel tower 31 sq ft w/Hazer T	12995.95
M-2212 120' galv steel tower 30 sq ft w/Hazer T	14800.95

LIGHTNING PROTECTION

LR-8400 Lightning rod kit (complete)	$ 89.95
GR-4400 Ground rod wire clamp	6.95
GR-5080 8' x 5/8" ground rod	20.95
TL-0470 Terminal lug	2.95
LR-8418 Lightning rod point, 18" long	28.95
LR-8452 Clamp; hold lightning rod to 2" mast	26.95
LR-8451 Clamp; hold lightning rod-1 5/16" mast	24.95
CW-2540 25' #4 bare copper ground wire ..	19.95

GLEN MARTIN - continued

	Reg	Sale
CW-5040 50' #4 bare copper ground wire ..	39.95	
CW-7540 75' #4 bare copper ground wire ..	58.95	
CW-1040 100' #4 bare copper ground wire ..	66.95	
CW-1240 125' #4 bare copper ground wire ..	97.95	
CW-1540 150' #4 bare copper ground wire ..	117.95	

HAZERS

H-2 175 lb load 12 sq ft HD aluminum Hazer	$360.95
H-3 150 lb load 8 sq ft std aluminum Hazer	273.95
H-4 200 lb load 16 sq ft galv steel Hazer	348.95
BW-8001 Brake winch for H-2/3/4	77.95
HR-2040 Roller bearing set for Hazers	62.95
HR-6010 T²X plates for H-2/3/4/5	25.95
HS-1301 Side arm for Hazers	64.95
ML-2500 Messenger line kit; Rohn towers .	74.95
VH8-60 Hazer - for 60' Rohn 45G	1295.95
VH8-70 Hazer - for 70' Rohn 45G	1410.95
VH9-50 Hazer - for 50' Rohn 55G	1331.95
VH9-60 Hazer - for 60' Rohn 55G	1455.95
VH9-70 Hazer - for 70' Rohn 55G	1567.95

GUYING

HP-3000 Kevlar guy cable, 3000# .....per ft	$	.99
HP-4500 Kevlar guy cable, 4500# .....per ft		1.49
HP-7500 Kevlar guy cable, 7500# .....per ft		1.99
WR-125 1/8" galv 7 x 7 guy cable .....per ft.		.49
WRS-156 5/32" SS 7 x 19 guy cable .....per ft.		.79
WRS-187 3/16" SS 7 x 19 guy cable .....per ft.		.89
WRS-250 1/4" SS 7 x 19 guy cable .....per ft.		.99
WR-1862 3/16" U-bolt clip		1.69
WR-2565 1/4" U-bolt clip		1.69
WR-3164 5/16" U-bolt clip		1.99
PT-2500 1/4" heavy duty thimble		2.69
PT-3100 5/16" heavy duty thimble		2.95
PT-3700 3/8" heavy duty thimble		3.39
H-165 1/4" end cap		.79
H-164 5/16" end cap		.89
H-142 3/8" end cap		.99
ES-40 4" dia x 30" earth screw		19.95
EG-40 4" dia x 30" galv earth screw		29.95
ES-60 6" dia x 48" earth screw		35.95
EG-60 6" dia x 48" galv earth screw		52.95
ES-80 8" dia x 66" earth screw		67.95
RG-4010 Lap link		7.95
TB-3806 3/8" x 6" galv turnbuckle		17.95
TB-5009 1/2" x 9" galv turnbuckle		23.95
TB-6212 5/8" x 12" galv turnbuckle		40.95

MAST

M-1049 9' 1.92" OD galv steel mast	$ 68.95
M-1040* 10' 1.92" OD galv steel mast .....T	73.95
MA-1040* 10' 1.92" OD aluminum mast ....T	79.95
*Truck, freight collect on M-1040 & MA-1040	
MA-1049 9' 1.92" OD aluminum mast	75.95
MA-2069 9' 2.375" OD aluminum mast	108.95
MA-1050 5' 1.92" OD aluminum mast	62.95
MA-5050 5' 1.33" OD aluminum mast	41.95
MP-1409 9' 2" OD .250 wall xtra HD fg mast	120.95
MP-1809 9' 2" OD .125 wall med dty fg mast	70.95

WINCHES

B-800 800 lb capacity w/4.5:1 gear ratio	$ 68.95
W-1100 1100 lb capacity w/3.9:1 gear ratio	37.95
W-1300 1300 lb capacity w/17:1 gear ratio .	55.95
B-2000 2000 lb capacity w/17:1 gear ratio ..	124.95

All $25+ GLEN MARTIN orders are shipped PREPAID (except M-1040 & MA-1040) at Glen Martin's expense direct to you from the factory (48 states). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload towers, so please be sure to have enough manpower and/or equipment on hand.

L.L. GRACE (GRA)

KCT Kansas City Tracker satellite package ...	$229.95
KCT/T Kansas City Tracker package/KC Tuner	319.95

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

	Reg	Sale
GROTHE (GRO)		
VS-2 Emergency vehicle siren	$ 99.00	89.95
VS-2LS/A Window mt siren/amber strobe	299.95	
VS-2LS/B Window mt siren/blue strobe	299.95	
VS-2LS/R Window mt siren/red strobe	299.95	
VS-3 Volunteer vehicle PA/horn w/spkr	159.00	129.95
VS-4 P/A emergency vehicle siren w/spkr	169.00	139.95
GROVE (GRV)		
ANT-20 No-Tenna Inside car rcv ant ....Δ	$ 19.95	4.95
BOK-104 Antenna Factbook ....Δ	9.95	5.95
GRUNDIG (GRU)		
MiniWorld 100PE Mini AM/FM/SW receiver	$ 49.95	
Traveller II Port AM/FM/SW/LW Rcvr/clock .D	69.95	49.95
Traveller III Digital AM/FM/SW/LW receiver .D	139.95	99.95
G-400ACA AC ps for Yacht Boy 400 ....Δ	12.95	
Yacht Boy 300PE Port AM/FM/SW/LW Rcvr	119.95	99.95
Yacht Boy 400PE Port AM/FM/SW/LW Rcvr/ps	249.95	199.95
HAL (HAL)		
DSP-4100 HF DSP modem ....special order	1295.00	1099.95
DXP-38 External DSP HF radio modem	395.95	
P-38 HF DSP modem board ....Δ	395.00	289.95
RTTY-1 RTTY tuning indicator	99.95	
ST-8000 HF modem ....special order	3495.00	3269.95
HARGER (HRG)		
GBIS18114AE ⅛" copper entrance ground bar kit	$ 27.95	
GBIS18148AE ⅛" copper station ground bar kit	64.95	
GEL3AE Package of 5 HD grounding lugs	15.95	
GP1868.78AE ⅛" copper single pt gnd panel kit	54.95	
GBX976AE NEMA-4x weatherproof enclosure	101.95	
HEIL (HEI)		
PRO-SET-4 Deluxe boom mic/headset/HC-4	$130.95	
PRO-SET-5 Deluxe boom mic/headset/HC-5	130.95	
PRO-MICRO-4 Boom mic/headset/HC-4	110.95	
PRO-MICRO-5 Boom mic/headset/HC-5	110.95	
PRO-5-4 Boom mic/single headset (HC-4)	120.95	
PRO-5-5 Boom mic/single headset (HC-5)	120.95	
AD-1-I Pro-Set 8-pin adapter cord for Icom	16.99	
AD-1-K Pro-Set 8-pin adapt cord; Kenwood	16.99	
AD-1-T Pro-Set 4-pin adapt cord; Ten-Tec	16.99	
AD-1-Y Pro-Set 8-pin adapter cord; Yaesu	16.99	
AD-1-I-M Pro-Set modular adapt cord; Ico	16.99	
AD-1-K-M Pro-Set modular adapt cord; Ken	16.99	
AD-1-Y-M Pro-Set modular adapt cord; Yae	16.99	
FS-1 Foot switch	29.99	
HS-1 Hand switch	24.99	
HC-4 DX'ers 'dream machine' mic element	29.99	
HC-5 Key microphone element	29.99	
AD-100 Microphone/boomset adapter; FT-100	24.99	
HMP In-line microphone preamp; Icom	54.99	
HMP-M In-line mic pre/mod plug; IC706/MkII	54.99	
GM-4 Goldline dual element studio mic w/HC-4	139.99	
GM-5 Goldline dual element studio mic w/HC-5	139.99	
HM-10-4 Microphone with HC-4 element	64.99	
HM-10-5 Microphone with HC-5 element	64.99	
HM-10-Dual Mic w/HC-4 & HC-5 elements	114.99	
CC-1-I HM-10 8-pin cable for Icom	29.99	
CC-1-K HM-10 8-pin cable for Kenwood	29.99	
CC-1-T HM-10 4-pin cable for Ten-Tec	29.99	
CC-1-Y HM-10 8-pin cable for newer Yaesu	29.99	
CC-1-I-M HM-10 modular cable for Icom	29.99	
CC-1-K-M HM-10 modular cable; Kenwood	29.99	
CC-1-Y-M HM-10 modular cable for Yaesu	29.99	
LX-1 Balanced 41" Luxo boom	94.99	
MA-1 Adjustable microphone boom	44.99	
SB-1 Small adjustable microphone boom	32.99	
TB-1 Table base microphone stand	24.99	
Boom Clip for BM-series	5.95	
Ear Pads for BM-series....pair	5.95	
Ear Pads for PRO-series....pair	8.95	
Ham Radio Handbook	12.95	

HEIL - continued	Reg	Sale
XT-1 Audio matching xfmr; lo-Z mic/tube Xcvr	15.95	
HUSTLER (HUS)		
RM-80 80m CW 400w PEP resonator	$ 26.95	
RM-75 75m phone 400w PEP resonator	26.95	
RM-40 40m 400w PEP resonator	24.95	
RM-30 30m 400w PEP resonator	24.95	
RM-20 20m 400w PEP resonator	21.95	
RM-17 17m 400w PEP resonator	21.95	
RM-15 15m 400w PEP resonator	15.95	
RM-12 12m 400w PEP resonator	15.95	
RM-11 CB 400w PEP resonator	15.95	
RM-10 10m 400w PEP resonator	15.95	
RM-80S 80m CW 2kw PEP resonator	49.95	
RM-75S 75m phone 2kw PEP resonator	49.95	
RM-40S 40m 2kw PEP resonator	35.95	
RM-20S 20m 2kw PEP resonator	28.95	
RM-15S 15m 2kw PEP resonator	24.95	
RM-11S CB 2kw PEP resonator	23.95	
RM-10S 10m 2kw PEP resonator	23.95	
MO-1 54" mast for fender or deck mount	31.95	
MO-2 54" mast for bumper mount	31.95	
MO-3 54" no break-over mast	23.95	
MO-4 22" mast for special applications	19.95	
VP-1 Tri-band adapter	5.95	
RSS-2 Resonator spring	9.95	
QD-2 Stainless quick disconnect	19.95	
L-14-144 12' RG-58, PL-259 to lugs	9.95	
L-14-240 20' RG-58, PL-259 to lugs	12.95	
STAINLESS 2" MOBILE BALL MOUNTS		
SSM-1 Ball & spring, cadmium hardware	$ 46.95	
SSM-2 Ball, cadmium hardware	26.95	
SSM-3 Stainless steel spring	24.95	
1-1/2" MOBILE BALL MOUNTS		
C-32 Chrome plated ball	$ 11.95	
C-30 Chrome plated spring	11.95	
C-29 Stainless steel spring	17.95	
BM-1 Single strap bumper mt w/C-32	21.95	
3/8-24 THREAD MOBILE MOUNTS		
HLM Trunk lip mount w/swivel	$ 22.95	
HOT Hustloff trunk lip mt w/swivel	23.95	
MBM Super magnet mount w/16' coax	19.95	
MM-3 Universal mount with 17' coax ....D	21.95	19.95
RVM Recreational vehicle mount	20.95	
TGM-1 Trunk grove mount ....D	12.95	9.95
TLM Trunk lip mount	21.95	
HF ANTENNAS		
4-BTV 40/20/15/10m 21' trap vertical	$166.95	119.95
5-BTV 80/40/20/15/10m 25' trap vertical	211.95	149.95
30-MTK 30m trap kit for 4-BTV/5-BTV	41.95	
6-BTV 80/40/30/20/15/10m 24' trap vert	246.95	179.95
VHF/UHF BASE STATION ANTENNAS		
G6-144B 2m 6 db 10' vertical antenna	$149.95	114.95
G6-270R 2m/440 6db 7.6' base station ant	209.95	159.95
G7-144 2m 7 db 15' vertical antenna	209.95	159.95
G7-220 220 MHz 7 db 10' vertical antenna	199.95	149.95
G6-440 440 MHz 6 db 7' vertical antenna	186.95	139.95
BUSINESS BAND ANTENNAS		
G7-150-4 7db 167-174 MHz base ant ....Δ	$229.95	99.95
G6-450-4 6db 470-478 MHz base ant ....Δ	209.95	99.95
VHF MOBILE ANTENNAS		
BBL-144A 2m FM ¾" hole mt antenna, 3.4db	$ 39.95	
BBLT-144A 2m FM trunk lip mt ant, 3.4 db	47.95	
CG-144 2m FM ⅜-24 ant, 7' high, 5.2 db	31.95	
CGT-144 2m FM trunk mt ant, 7' high, 5.2db	51.95	
CG-220 220 FM ⅜-24 ant, 5.2 db	31.95	
CGT-220 220 MHz 5.2 db tnk mt ant	51.95	
FX-2 2m FM 3.4 db magnetic mt antenna	33.95	
FX-2B 2m FM 3.4 db black mag mt antenna	38.95	
FX-220 220 FM 3.4 db magnetic mt ant	33.95	
FX-220B 220 FM 3.4 db black mag mt ant	38.95	
MKR-2 Radial kit for SF-2/CG-144	20.95	
MX-2 2m FM 3 db magnetic mt antenna	34.95	

HUSTLER - continued	Reg	Sale
MX-2B 2m FM 3 db black magnetic mt ant	34.95	
MX-220 220 FM 3 db magnetic mt antenna	34.95	
MX-440 440 FM 5 db magnetic mt antenna	34.95	
RX-2 2m FM 3.4 db magnetic mount ant	24.95	
RX-220 220 FM 3.4db magnetic mt antenna	24.95	
RX-440 440 FM 5 db magnetic mt antenna	24.95	
SF-2 2m FM ⅜-24 ant, 4' high, 3.4 db	14.95	
SF-220 220 MHz ⅜-24 antenna, 3 db	14.95	
THF 140-500 MHz ¼ wave trunk mount ant	23.95	
UGM 140-500 MHz ¼ wave BNC mag mt ant	21.95	
UHT-1 140-500 MHz ¼ wave roof mt ant	14.95	
CB & MONITOR ANTENNAS		
DTG 25" fg double-talk gutter mt CB ant	$ 41.95	
HQ-27 Power Packer ⅜-24 CB whip	17.95	
HQ-27M Power Packer trunk mt CB antenna	36.95	
HQD Dual fg mirror mount CB antenna	49.95	
HQT Single fg mirror mount CB antenna	27.95	
RTG-27L 25" CB antenna w/rain gutter mt	26.95	
RTS-27L 25" CB antenna w/roof mount	26.95	
DCL Discone monitor ant w/50' coax & plugs	34.95	
DCX Discone monitor ant; 40-700 MHz	23.95	
MOR Roof/deck mt tri-band monitor ant	18.95	
MOT Trunk lip mt tri-band monitor antenna	19.95	
HY-GAIN (HYG)		
373S Discoverer 7-3 3rd el; 372S; 35' bm ....Δ	$379.95	279.95
189S GRK-88 Ground radial kit ....Δ	81.95	59.95
190S RRK-88 Roof radial kit ....Δ	89.95	69.95
191S 160MK-88 160m kit for 188S ....Δ	179.95	129.95
184 14RMQ Roof kit-12/14AVQ,18AVT ....Δ	71.95	29.95
381S 19PD 80-10 233' 1-band port dip ....Δ	269.95	189.95
231S 70-31DX 430 31 el bm, 24' boom ....Δ	209.95	139.95
216S 216SAT 2m 16el 145.9MHz boom ....Δ	219.95	149.95
157S CIC Dipole center insulator/SO-239 .Δ	12.95	
2400-155 62400155 Boom mic/headset ....Δ	119.95	59.95
117 HG-10 10' 2" OD .120 wall steel mast ...Δ	79.95	39.95
MULTI-BAND VERTICAL ANTENNAS		
AV-620 20/17/15/12/10/6m vertical ant	$269.95	
AV-640 40/30/20/17/15/12/10/6m vertical	359.95	
ANTENNA ROTORS		
AR-40 3 sq ft antenna rotor/5-wire	$269.95	
CD-45II 8.5 sq ft antenna rotor/8-wire	369.95	
HAM-IV 15 sq ft antenna rotor/8-wire	529.95	
HAM-V Digital 15 sq ft antenna rotor/8-wire	899.95	
HDR-300A Hvy duty dig 25 sq ft rotor/8-wire	1229.95	
T-2X Tailtwister 20 sq ft antenna rotor/8-wire	619.95	
T-2XD Tailtwister dig 20 sq ft ant rotor/8-wire	979.95	
OPTIONAL ACCESSORIES FOR ROTORS		
DCU-1 Digital rotor control; HAM-IV/T-2X	$619.95	
MSHD Lwr mast support; HAM-IV/V/T-2X/XD	81.95	
MSLD Lower mast support; CD-45II/AR-40	29.95	
TSP-1 Tower spacer plate	29.95	
See BELDEN for rotor cable		
ICOM (ICO)		
IC-781 Xcv/Rcv/ps/tuner/scope ...spec order	8752.00	6999.95
CT-17 CI-V level converter	169.00	139.95
FL-103 2.8 KHz 9 MHz IF SSB filter	123.00	109.95
OPC-478 PC to radio cable	45.95	
UT-36 Voice synthesizer	74.95	
IC-775DSP Xcvr/ps/keyer/tuner/IF-DSP	4300.00	3499.95
CR-282 High stability crystal unit	168.00	149.95
CT-17 CI-V level converter	169.00	139.95
FL-53A 250 Hz 455 KHz IF CW filter	245.00	199.95
FL-101 250 Hz 9 MHz IF CW filter	133.00	119.95
FL-102 6 KHz 9 MHz IF AM filter	94.95	
FL-222 1.9 KHz 455 KHz IF SSB filter	249.00	199.95
FL-223 1.9 KHz 9 MHz IF SSB filter	105.00	99.95
FL-232 350 Hz 9 MHz IF CW/RTTY filter	113.00	104.95
HM-36 Scanning hand mic	74.95	
MB-19 Rack mounting handles	74.95	
OPC-478 PC to radio cable	45.95	
SM-6 Desk microphone	128.00	119.95
SM-8 2-connector desk mic/up/down scan	200.00	169.95

ICOM - continued

	Reg	Sale
SM-20 Deluxe desk microphone	259.00	219.95
SP-20 Speaker w/audio filter	310.00	249.95
SP-21 External speaker	138.00	119.95
UT-66 Voice synthesizer D	83.95	
IC-756 Xcvr/Rcvr/6m/IF-DSP/tuner/keyer	2445.00	1999.95
PS-85 Switching power supply	406.00	299.95
IC-756/PS-85 HF Xcvr/switching ps combo	2851.00*	2199.90
*Sale price w/instant coupon; coupon expires 12/31/99		
AH-4 80-6m 120w automatic ant tuner	348.00	319.95
AH-2B Bpr mt/whip; 40-6m use tuner	379.00	299.95
AH-2B extra whip only	49.95	
CR-502 High stability oscillator crystal	95.95	
CT-17 CI-V level converter	169.00	139.95
FL-52A 500 Hz 455 KHz IF CW filter	245.00	199.95
FL-53A 250 Hz 455 KHz IF CW filter	245.00	199.95
FL-100 500 Hz 9 MHz IF CW filter	133.00	119.95
FL-101 250 Hz 9 MHz IF CW filter	133.00	119.95
FL-222 1.9 KHz 455 KHz IF SSB filter	249.00	199.95
FL-223 1.9 KHz 9 MHz IF SSB filter	105.00	99.95
FL-232 350 Hz 9 MHz IF CW/RTTY filter	113.00	104.95
FL-257 3.3 KHz 455 KHz IF SSB filter	225.00	189.95
HM-36 Scanning hand mic	74.95	
OPC-478 PC to radio cable	45.95	
SM-6 Desk microphone	128.00	119.95
SM-8 2-connector desk mic/up/down scan	200.00	169.95
SM-20 Deluxe desk microphone	259.00	219.95
SP-20 Speaker w/audio filter	310.00	249.95
SP-21 External speaker	138.00	119.95
UT-102 Voice synthesizer	74.95	
IC-746 Xcvr/Rcvr/6m/2m/IF-DSP/tuner/mic	2228.00*	1589.95
*Sale price w/instant coupon; coupon expires 12/31/99		
PS-85 Switching power supply	406.00	299.95
AH-4 80-6m 120w automatic ant tuner	348.00	319.95
AH-2B Bpr mt/whip; 40-6m use tuner	379.00	299.95
AH-2B extra whip only	49.95	
CR-282 High stability crystal unit	168.00	149.95
CT-17 CI-V level converter	169.00	139.95
RS-746 Win remote control software	79.95	
FL-52A 500 Hz 455 KHz IF CW filter	245.00	199.95
FL-53A 250 Hz 455 KHz IF CW filter	245.00	199.95
FL-96 2.8 KHz 455 KHz IF SSB filter	190.00	169.95
FL-100 500 Hz 9 MHz IF CW filter	133.00	119.95
FL-101 250 Hz 9 MHz IF CW filter	133.00	119.95
FL-103 2.8 KHz 9 MHz IF SSB filter	123.00	109.95
FL-222 1.9 KHz 455 KHz IF SSB filter	249.00	199.95
FL-223 1.9 KHz 9 MHz IF SSB filter	105.00	99.95
FL-232 350 Hz 9 MHz IF CW/RTTY filter	113.00	104.95
OPC-478 PC to radio cable	45.95	
SM-6 Desk microphone	128.00	119.95
SM-8 2-connector desk mic/up/down scan	200.00	169.95
SM-20 Deluxe desk microphone	259.00	219.95
SP-21 External speaker	138.00	119.95
UT-102 Voice synthesizer	74.95	
CR-64 High stab oscillator xtal; IC-728 Δ	156.00	99.95
MB-49 Mobile mounting bkt; IC-738 Δ	59.95	39.95
IC-707 Xcvr/SW Rcvr w/mic	786.00	649.95
PS-85 Switching power supply	406.00	299.95
AH-4 80-6m 120w automatic ant tuner	348.00	319.95
AH-2B Bpr mt/whip; 40-6m use tuner	379.00	299.95
AH-2B extra whip only	49.95	
CR-338 High stability crystal unit	81.95	
CT-17 CI-V level converter	169.00	139.95
FL-52A 500 Hz 455 KHz IF CW filter	245.00	199.95
FL-53A 250 Hz 455 KHz IF CW filter	245.00	199.95
MB-23 Side mount carrying handle	15.95	
MB-5 Mobile mount	59.95	
SM-6 Desk microphone	128.00	119.95
SM-8 2-connector desk mic/up/down scan	200.00	169.95
SM-20 Deluxe desk microphone	259.00	219.95
SP-7 Small external speaker	94.95	
SP-20 Speaker w/audio filter	310.00	249.95
SP-21 External speaker	138.00	119.95
UI-9 FM module	113.00	104.95
UT-30 Tone encoder	55.95	

ICOM - continued

	Reg	Sale
IC-706 Mk II Mini Xcvr/SW Rcvr/6m/2m/DSP D	1356.00	1099.95
IC-706 Mk II G Mini Xcvr/Rcvr/6m/2m/440/DSP	1680.00	1399.95
(BET) 706 Tune Control for IC-706-series	32.95	
PS-85 Switching power supply	406.00	299.95
AH-4 80-6m 120w automatic ant tuner	348.00	319.95
AH-2B Bpr m/whip; 40-6m use tuner	379.00	299.95
AH-2B extra whip only	49.95	
AT-180 Auto antenna tuner; HF+6m	599.00	499.95
OPC-598 23' extension cable for AT-180	73.95	
CR-502 High stability oscillator xtal; Mk II	95.95	
CR-282 High stability crystal unit; Mk II G	168.00	149.95
Suggest dealer installation; CR-502/CR-282, Mk II/Mk II G		
CT-17 CI-V level converter	169.00	139.95
FL-100 500 Hz 9 MHz IF CW filter	133.00	119.95
FL-101 250 Hz 9 MHz IF CW filter	133.00	119.95
FL-103 2.8 KHz 9 MHz IF SSB filter	123.00	109.95
FL-223 1.9 KHz 9 MHz IF SSB filter	105.00	99.95
FL-232 350 Hz 9 MHz IF CW/RTTY filter	113.00	104.95
HM-95 TTP microphone	99.95	
MB-62 Mounting bracket for main unit	25.95	
MB-63 Mounting bracket for control panel	18.95	
MB-65 Mounting base platform	35.95	
MB-72 Carrying handle; 706/Mk II/Mk II G	14.95	
OPC-478 PC to radio cable	45.95	
OPC-581 11.5' separation cable	60.95	
OPC-587 16' separation cable	79.95	
OPC-599 7+8-pin to 13-pin adapter	60.95	
OPC-742 13-pin cable	60.95	
SM-6 Desk microphone	128.00	119.95
SM-8 2-connector desk mic/up/down scan	200.00	169.95
SM-20 Deluxe desk microphone	259.00	219.95
OPC-589 8-pin to jack adapt; SM-6/8/20	35.95	
SP-7 Small external speaker	94.95	
UT-86 Tone squelch; IC-706 Mk II only	69.95	
UT-102 Voice synthesizer	74.95	
UT-106 Plug-in DSP; early 706 Mk II only	166.00	149.95
AH-710 1.9-30 MHz 80' folded dipole	360.00	299.95
PW-1 160-6m linear amplifier/ps/tuner	5995.00	4799.95
OPC-137 Adapter cable; older Icom Xcvr D	25.95	19.95

RECEIVERS

	Reg	Sale
R-1* .1MHz-1.3GHz AM/FM handheld Rcvr D	$650.00	299.95
HP-4 Lightweight headphones	29.95	
R-2-06 .5M-1.3G AM/FM hand/batts/cgr/cell blkd †	244.00	199.95
R-2-07* .5MHz-1.3GHz AM/FM hand Rcvr	244.00	219.95
AD-92SMA SMA- BNC adapter	16.95	
BC-127A Extra nicad charger	20.95	
CS-R2 DOS programming software; R-2	13.95	
OPC-474 Cloning cable (R-2 to R-2)	18.95	
OPC-478 PC - radio programming cable	45.95	
CSW-HHRX Win prog soft/cable; R-2/R-10	50.95	
HP-4 Lightweight headphones	29.95	
LC-146 Carrying case	38.95	
SP-13 Earphone	4.95	
R-10-05 .5M-1.3G AM/FM/SSB hand/cell blkd †	503.00*	299.95
*Sale price w/instant coupon; coupon expires 12/31/99		
CS-R10 & OPC-478 FREE direct from Icom thru 12/31/99!		
R-10-15* .5MHz-1.3GHz AM/FM/SB HH Rcvr †	503.00*	299.95
*Sale price w/instant coupon; coupon expires 12/31/99		
CS-R10 & OPC-478 FREE direct from Icom thru 12/31/99!		
CP-12L Right angle cig cable w/filter	36.95	
CS-R10 DOS programming software; R-10	13.95	
OPC-474 Cloning cable (R-10 to R-10)	18.95	
OPC-478 PC - radio programming cable	45.95	
CSW-R10 Windows prog soft/cable; R-10 D	52.95	44.95
CSW-HHRX Win prog soft/cable; R-10/R-2	50.95	
CT-17 CI-V level converter	169.00	149.95
HP-4 Lightweight headphones	29.95	
LC-140 Carrying case for R-10	38.95	
OPC-254L Right angle mini DC pwr cable	14.95	
SP-13 Earphone	4.95	
CK-70 (EX-299) 12v DC option; R-7000 Δ	41.95	
FL-32A 500 Hz CW filter; R-71A Δ	126.00	99.95
FL-63A 250 Hz CW filter; R-71A Δ	121.00	89.95
UI-8 FM unit; R-72A D	119.00	49.95

ICOM - continued

	Reg	Sale
R-100* .1MHz-1.856GHz AM/FM 12v Rcvr	1008.00	849.95
R-100-11 .1M-1.856Gz am/fm 12v/cell blkd	1008.00	849.95
AH-7000 25-1000 MHz discone ant w/coax	206.00	179.95
CP-11 Cig cord w/noise filter Δ	40.95	
HP-4 Lightweight headphones	29.95	
PCR-100-12 .01-1300 am/fm PC Rcv/cell blkd †	359.00*	199.95
*Sale price w/instant coupon; coupon expires 12/31/99		
PCR-100-08* .01-1300 PC controlled Rcvr †	359.00*	199.95
*Sale price w/instant coupon; coupon expires 12/31/99		
AH-7000 25-1000 MHz discone ant w/coax	206.00	179.95
PCR-1000 .5-1300 am/fm/sb PC Rcv/cell blkd †	629.00	399.95
PerCon Spectrum FREE direct from Icom thru 12/31/99!		
PCR-1000-03/07* .5-1300 PC control Rcvr †	629.00	399.95
PerCon Spectrum FREE direct from Icom thru 12/31/99!		
AH-7000 25-1000 MHz discone ant w/coax	206.00	179.95
UT-106 Plug-in DSP unit	166.00	149.95
R-75 .03-60 MHz shortwave receiver	949.00	799.95
UT-106 DSP FREE direct from Icom with R-75 thru 12/31/99		
CR-282 High stability crystal unit	168.00	149.95
CT-17 CI-V level converter	169.00	139.95
FL-52A 500 Hz 455 KHz IF CW filter	245.00	199.95
FL-53A 250 Hz 455 KHz IF CW filter	245.00	199.95
FL-96 2.8 KHz 455 KHz IF SSB filter	190.00	169.95
FL-100 500 Hz 9 MHz IF CW filter	133.00	119.95
FL-101 250 Hz 9 MHz IF CW filter	133.00	119.95
FL-103 2.8 KHz 9 MHz IF SSB filter	123.00	109.95
FL-222 1.9 KHz 455 KHz IF SSB filter	249.00	199.95
FL-223 1.9 KHz 9 MHz IF SSB filter	105.00	99.95
FL-232 350 Hz 9 MHz IF CW/RTTY filter	113.00	104.95
FL-257 3.3 KHz 455 KHz IF SSB filter	225.00	189.95
MB-5 Mobile mount	59.95	
MB-23 Side mount carrying handle	15.95	
OPC-478 PC to radio cable	45.95	
SP-21 External speaker	138.00	119.95
UT-102 Voice synthesizer	74.95	
UT-106 Plug-in DSP unit	166.00	149.95
R-8500 .1M - 2G receiver/cell blocked †	2156.00	1499.95
R-8500-03* .1MHz - 2GHz receiver †	2156.00	1499.95
AH-7000 25-1000 MHz discone ant w/coax	206.00	179.95
CR-293 High stability xtal unit	380.00	329.95
FL-52A 500 Hz CW filter	245.00	199.95
MB-12 Mobile mount	59.95	
MB-23 Side mount carrying handle	15.95	
RS-R8500 PC control soft w/RS-232 cable	80.95	
SP-7 Small external speaker	94.95	
SP-21 External speaker	138.00	119.95
TV-R7100 TV/FM adapter; R-8500/R-7100	426.00	369.95
UT-102 Voice synthesizer	74.95	
R-9000* .1-1999.8MHz Rcvr/scope spec order	6579.00	5399.95
SP-20 Speaker w/audio filter	310.00	249.95
UT-36 Voice synthesizer	74.95	

*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents **ONLY** may purchase unblocked models of R-1/R-2/R-10/R-100/PCR-100/PCR-1000/R-7000/R-8500 and/or R-9000 for official government or communications utility company use only. Mail or FAX purchase order to AES. Exports: inquire.

2m TRANSCEIVERS

	Reg	Sale
UT-101 DTMF unit for IC-2000H Δ	$ 28.95	
IC-2100H 55w 2m FM Xcvr/TTP mic	244.00	199.95
BC-96 Microphone holder	43.95	
CP-13L Cig cable w/filter for BC-96	40.95	
OPC-288L DC power cable for BC-96	19.95	
CS-2100 DOS cloning software	13.95	
OPC-478 PC to radio cloning cable	45.95	
EX-1513 Infrared sub receiver	28.95	
EX-1759 Infrared receiver	110.95	99.95
HM-90A Wireless microphone	209.00	159.95
HS-62 Flexible mobile mic	70.95	
MB-17A Quick release bracket	49.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-441 Speaker extension cable	33.95	

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Browse Our Store On-Line at www.aesham.com

ICOM - continued

	Reg	Sale
OPC-474 Radio to radio cloning cable	18.95	
OPC-589 8-pin to jack adapter	35.95	
OPC-647 8.2' mic extension cable	54.95	
UT-67 Tone squelch unit ....Δ	124.00	49.95
UT-85 Tone squelch unit ....Δ	76.95	49.95
IC-207H 45w 2m/35w 440 FM Xcvr/TTP	453.00	*339.95
*Sale price w/instant coupon; coupon expires 12/31/99		
BC-96 Microphone holder	43.95	
CP-13L Cig cable w/filter for BC-96	40.95	
OPC-288L DC power cable for BC-96	19.95	
CS-207 DOS prog software; IC-207H	13.95	
CSW-207/2710 Win cloning soft; 207/2710	30.95	
OPC-646 Clone cbl; CS-207/CSW-207/2710	89.95	
EX-1759 Infrared receiver	110.95	99.95
HS-62 Flexible mobile mic	70.95	
HM-90A Wireless microphone	209.00	159.95
MB-17A Quick release bracket	49.95	
MB-58 Remote controller bracket	39.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-441 Speaker extension cable	33.95	
OPC-589 8-pin to jack adapter	35.95	
OPC-600 11.5' separation kit	45.95	
OPC-601 23' separation kit	60.95	
OPC-647 8.2' mic extension cable	54.95	
RMK-3 Package of MB-58/OPC-600/OPC-647	84.95	
OPC-439 23' separation kit; IC-2700H ....Δ	60.95	49.95
UT-89 Tone scan/decode unit; IC-2350H ....Δ	110.00	89.95
CS-2710 DOS prog software; IC-2710H ....Δ	13.95	9.95
UT-104 Tone squelch unit; IC-2710H ....Δ	39.95	
IC-2800H 50w 2m/35w 440 FM Xcvr/9600	670.00	549.95
CS-2800 Windows cloning software	13.95	
OPC-478 PC to radio cloning cable	45.95	
EX-1513 Infrared sub receiver	28.95	
EX-1759 Infrared receiver	110.00	99.95
HM-90A Wireless microphone	209.00	159.95
MB-17A Quick release bracket	49.95	
MB-65 Mounting base platform	35.95	
MB-73 Controller bracket	26.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-589 8-pin to jack adapter	35.95	
OPC-647 8.2' mic extension cable	54.95	
OPC-872 Controller extension cable	27.95	
SP-10 Slim-line external speaker	69.95	
UT-49 DTMF decoder unit	74.95	
IC-821H 2m/430 SSB/FM sat Xcvr/9600/mic	1695.00	1399.95
PS-85 Switching power supply	406.00	299.95
AG-25 2m mast mounted GaSFET preamp	220.00	189.95
AG-35 430 MHz mast mounted preamp	228.00	199.95
CR-293 High stability xtal unit	380.00	329.95
FL-132 500 Hz main receiver CW filter	133.00	119.95
FL-133 500 Hz sub band receiver CW filter	133.00	119.95
HM-12 Scan hand microphone	74.95	
MB-5 Mobile mount	59.95	
MB-23 Side mount carrying handle	15.95	
SM-6 Desk microphone	128.00	119.95
SM-20 Deluxe desk microphone	259.00	219.95
SP-7 Small external speaker	94.95	
SP-20 Speaker w/audio filter	310.00	249.95
SP-21 External speaker	138.00	119.95
UT-36 Voice synthesizer; 820H	74.95	
UT-50 Tone decoder	74.95	
UT-84 Tone squelch unit; 821H	110.00	99.95
UT-102 Voice synthesizer; 821H	74.95	
MB-50 Rem controller bkt; Delta100H ....D	29.95	9.95
OPC-332 11.5' sep kit; Delta100H ....D	30.95	9.95
OPC-333 23' sep kit; Delta100H ....D	38.95	9.95
OPC-335 16.4' spkr cbl; Delta100H ....D	40.95	9.95

Accessories for IC-2AT

	Reg	Sale
BC-25U Extra wall cgr; BP-3 only ....Δ	$ 35.95	29.95
BC-35 Drop-in rapid charger ....Δ	150.00	119.95
BM-112U/BC-16U Wall cgr; 5A/7/8 only ....Δ	32.95	29.95

ICOM - continued

	Reg	Sale
BP-2 425ma 7.2v long life battery ....Δ	85.95	49.95
BP-3 250ma 8.4v battery ....Δ	65.95	49.95
BP-4 Alkaline battery case ....Δ	35.95	29.95
BP-5 425ma 10.8v high power battery ....Δ	109.00	79.95
BP-5A 425ma 10.8v direct charge battery ...Δ	109.00	79.95
BP-7 425ma 13.5v 5w battery ....Δ	121.00	99.95
BP-8 800ma 8.4v long life battery ....Δ	120.00	89.95
CP-1 Cig cgr; BP-3/7/8//DC cord ....Δ	26.95	19.95
CP-11 Cig cord w/noise filter ....Δ	40.95	
DC-1 DC operation module ....Δ	40.95	34.95
HH-SS Handheld shoulder strap ....Δ	29.00	6.95
MB-16 Window/car door mount ....D	40.00	9.95

Accessories for IC-2iA

	Reg	Sale
AD-26 Batt pack adapt; rapid cgr ....D	$ 18.00	4.95
HM-9L Speaker/mic ....D	59.00	19.95
IC-T2H 6w 2m FM HT/8 AA nicads/cgr	194.00	169.95
AD-81 Adapter for BC-119-11	17.95	
BC-119-11 Desk charger (adapter required)	103.00	94.95
BC-133 Drop-in trickle charger	40.95	
BP-194 AA alkaline battery case	18.95	
BP-195 9.6v 700ma nicad battery	42.95	
BP-196 9.6v 1050ma nicad battery	53.95	
CP-12L Rt angle cig charge cable w/filter	36.95	
CS-T2 DOS prog software for IC-T2 ....†	13.95	9.95
OPC-474 Cloning cable (T2 to T2)	18.95	
OPC-478 PC to radio cloning cbl; T2	45.95	
CSW-HH4 Win prog soft w/cable; T2	50.95	
HM-46 Slim-line speaker/mic	45.95	
HM-54 Hvy duty spkr/mic	83.95	
HM-75A Remote control microphone	70.95	
HS-51 Headset w/VOX	96.95	
LC-145 Carrying case for IC-T2	38.95	
OPC-254L Right angle mini DC chg cable	14.95	
SP-13 Earphone	4.95	
LC-123 Vinyl case; Z1A; BP170/71/72 ....D	38.95	6.95
UT-93 Tone squelch; early IC-Z1A ....D	83.00	9.95
IC-T22A 3w 2m FM HT/batt/cgr/TTP	283.00	*209.95
*Sale price w/instant coupon; coupon expires 12/31/99		
IC-T7H 6w 2m/440 HT/batt/cgr/TTP	330.00	*239.95
*Sale price w/instant coupon; coupon expires 12/31/99		
IC-W32A 5w 2m/440 FM HT/batt/cgr/TTP/tone	365.00	299.95
AD-51 Batt pack adapter; W32A	14.95	
AD-56 Batt pack adapter; T22A/T7	18.95	
BC-119-11 Desk charger (adapter required)	103.00	94.95
BP-170 Battery case	35.95	
BP-171 4.8v 700ma battery ....Δ	83.00	49.95
BP-172 4.8v 950ma battery	91.95	
BP-173 9.6v 600ma battery	150.00	139.95
BP-180 7.2v 600ma battery	83.95	
CP-12 Cig lighter cable w/filter	36.95	
CP-12L Right angle cig cable w/filter	36.95	
CS-T7 DOS prog software for IC-T7 ....†	13.95	9.95
CSW-32 DOS prog software for IC-W32A .†	13.95	9.95
OPC-474 Cloning cbl (T7/32A to T7/32A)	18.95	
OPC-478 PC to radio cloning cbl;T7/W32A	45.95	
CSW-HH4 Win prog soft/cbl; W32A/T7	50.95	
FA-1443B Extra 2m/440 dual band flex ant	29.95	
HM-46 Slim-line speaker/mic	45.95	
HM-46L Slim-line spkr/mic, rt angle plug	45.95	
HM-54 Heavy duty spkr/mic	83.95	
HM-75A Remote control microphone	70.95	
HS-10 Boom mic/headset	69.95	
HS-10SA VOX unit	69.95	
HS-10SB PTT switchbox	69.95	
HS-85 Headset w/VOX	89.95	
LC-125 Vinyl case; T22A w/BP170/171/172	38.95	
LC-126 Vinyl case; T22A w/BP173	38.95	
LC-128 Vinyl case; IC-W32A	38.95	
LC-136 Vinyl case; T7 w/BP170/171/172	38.95	
LC-137 Vinyl case; T7 w/BP173/180	38.95	
MB-30 Mobile/wall bracket	41.95	
NCP-1 Nylon chest pack	44.95	39.95
OPC-254 Mini DC power cable	14.95	

ICOM - continued

	Reg	Sale
OPC-254L Right angle mini DC pwr cable	14.95	
SP-13 Earphone	4.95	
UT-94 Tone squelch unit; T22A	55.95	
IC-Q7ABC 300mw 2m/440 HT/batts/cgr	212.00	179.95
AD-92SMA SMA- BNC adapter	16.95	
BC-127A Extra nicad charger	20.95	
HM-46 Slim-line speaker/mic	45.95	
HS-85 Headset w/VOX	89.95	
SP-13 Earphone	4.95	
OPC-782 Plug adapt cbl; HM46/HS85/SP13	16.95	
LC-146 Carrying case	38.95	
IC-T8A/HP 5w 6m/2m/440 HT/BP200/cgr/TTP	419.00	*279.95
*Sale price w/instant coupon; coupon expires 12/31/99		
BP-197 batt case FREE with IC-T8A/HP! Limited Time!		
IC-T81A 5w 6m/2m/440/1w 1.2 HT/batt/cgr/TTP	479.00	399.95
AD-87 Batt pack adapter for rapid charger	8.95	
AD-88 PCB board; orig BC-119-11	29.95	
AD-92SMA SMA- BNC adapter	16.95	
BC-119-31 Desk charger (adapter required)	107.00	99.95
BP-197 3 AA battery case	24.95	
BP-198 4.8v 700ma NiMH battery	59.95	
BP-199 6v 700ma NiMH battery	70.95	
BP-200 9.6v 680ma NiMH battery	85.95	
CP-12 Cig lighter cable w/filter	36.95	
CP-12L Right angle cig cable w/filter	36.95	
CS-T8K DOS prog software w/cable; IC-T8A	58.95	
CS-T81 DOS cloning software; IC-T81A	13.95	
OPC-474 Cloning cable (radio to radio)	18.95	
OPC-478 PC to radio cloning cable	45.95	
CSW-HH4 Win prog soft w/cable; T8A	50.95	
HM-46 Slim-line speaker/mic	45.95	
HM-54 Heavy duty spkr/mic	83.95	
HM-75A Remote control microphone	70.95	
HS-51 Headset w/VOX	96.95	
HS-85 Headset w/VOX	89.95	
LC-147 Carrying case; IC-T8A/HP	24.95	
LC-148 Carrying case; IC-T81A	24.95	
OPC-254 Mini DC power cable	14.95	
OPC-254L Right angle mini DC pwr cable	14.95	
SP-13 Earphone	4.95	
BP-130 Battery case; W21AT ....Δ	35.95	19.95
BP-131 900ma 7.2v batt/mic; W21AT ....D	133.00	59.95
BP-132 600ma 12v batt/mic; W21AT ....D	150.00	79.95

Accessories for IC-2SAT/2SRA/24AT/W2A

	Reg	Sale
AH-20 Replacement rcv ant; IC-2SRA ....Δ	$ 28.95	24.95
BA-12 Drop-in charger adapter ....Δ	29.95	24.95
BC-110A/BC-74 Wall cgr; BP-111-114 ....Δ	40.95	34.95
BP-82 7.2v 300ma battery ....Δ	83.00	49.95
BP-83 7.2v 600ma battery ....Δ	90.95	69.95
BP-84 7.2v 1000ma battery ....Δ	120.00	89.95
BP-90 AA alkaline battery case ....Δ	35.95	29.95
MB-22 Alligator belt/pocket clip ....Δ	15.95	4.95
IC-2GXAT/HP 7w 2m HT/batt/cgr/TTP	274.00	229.95
AD-25 Battery charger adapter	63.95	
AD-28 Batt pack adapter for rapid charger	18.95	
BC-105A/BC-77 Extra wall charger	40.95	
BC-119-11 Desk charger (adapter required)	103.00	94.95
BP-130A Battery case ....D	35.00	24.95
BP-157A 900ma 7.2v battery	85.95	
BP-160 700ma 7.2v battery ....Δ	66.00	29.95
BP-174 600ma 12v battery	98.95	
CP-13 Cig cable w/filter	40.95	
CP-13L Right angle cig cable w/filter	40.95	
HM-46 Slim-line speaker/mic	45.95	
HM-46L Slim-line spkr/mic, rt angle plug	45.95	
HM-54 Heavy duty spkr/mic	83.95	
HM-55A Speaker/mic w/TTP ....Δ	159.00	69.95
HS-51 Headset w/VOX	96.95	
LC-116 Carrying case; BP-130A/157A/160	38.95	
LC-117 Carrying case for BP-132A	38.95	
MB-30 Mobile/wall bracket	41.95	
OPC-288 Mini DC power cable	19.95	
OPC-288L Rt angle mini DC pwr cable ...D	19.95	14.95

ICOM - continued

	Reg	Sale
SP-13 Earphone	4.95	
UT-49 DTMF decoder unit	74.95	
AD-22 External batt chg adapt; D1A .....D	50.95	24.95
AD-27 Batt pack adapt; rapid cgr; D1A .....D	14.95	6.95
LC-82 Vinyl case; Delta-1A w/BP-103 .....D	35.95	9.95
AD-44 Batt adapt; rapid cgr; T21A .....D	18.95	2.95
LC-109 Vinyl case; BP151/159; T21A .....D	38.95	14.95
LC-110 Vinyl case; BP-153; ICT21A .....D	38.00	4.95
LC-111 Vinyl case; BP-152; IC-T21A .....D	38.95	14.95
RP-1520 25w 2m FM repeater/ps spec order	3025.00	2499.95
RP-1520 requires Icom service dept. set-up; $72 minimum		

440 MHz & 1.2 GHz EQUIPMENT

RP-4020/50w 50w 440 repeater/ps spec order	3200.00	2649.95
RP-4020 requires service dept. set-up; $72 minimum		
AG-1200 1.2 GHz mast mt preamp	189.00	169.95

ACCESSORIES

CT-16 Satellite interface unit	$160.00	144.95
CT-17 CI-V level converter	169.00	139.95
HM-12 Scan hand microphone	74.95	
HM-14 Scan/TTP microphone	113.00	99.95
HM-56A Autodial TTP mic	173.00	149.95
MB-23 Side mount carrying handle	15.95	
OPC-137 Adapter cable; older Icom Xcvr ...D	25.95	19.95
PS-85 Power supply	406.00	299.95
SM-6 Electret desk microphone	128.00	119.95
SM-8 2-connector desk mic w/up/down scan	200.00	169.95
SM-20 Deluxe desk microphone	259.00	219.95
SP-5 Mobile speaker	54.95	
SP-7 Small external speaker	94.95	
SP-10 Slim-line external speaker	69.95	
SP-12 Slim-line speaker w/visor clip	44.95	
SP-20 Speaker w/audio filter	310.00	249.95

CONSUMER ELECTRONICS

A-22 5w PEP compact Navicom air handheld .	$720.00	549.95
UT-14 Tone unit for IC-U18 .....D	115.00	9.95
IC-F10-1 2w 146-174MHz 24 ch HT .....D	495.00	269.95
AD-54 Cgr adapter; BM113U; F10/F20 ....Δ	34.00	19.95
BM-113U Trickle charger; F10/F20 .....Δ	26.00	15.95
IC-M3A 5w VHF marine handheld w/AA nicads	300.00	189.95
IC-M45W White 25w VHF marine Xcvr .....D	319.00	189.95
IC-M45AW White 25w VHF marine Xcvr	319.00	199.95
M-710 (21) 150w HF marine SSB .spec order	2100.00	1399.95
M-710-05 (22) 150w 1.6-27.5 SSB .spec order	2400.00	1599.95
AT-130 HF marine auto ant tuner spec order	595.00	449.95
IC-4008A Family radio service black handheld	140.00	79.95
BC-127A Nicad charger	20.95	
BP-202 Nicad battery assembly	17.95	
HM-46 Slim-line speaker/mic	45.95	
HS-85 Headset w/VOX	89.95	

IDIOM PRESS (IDI)

K-3 Logikey CW keyer	$129.95	119.95
HK-3 Hook-up kit	10.95	

INTERFLEX (INT)

dspGOLD Software for AEA DSP-2232 .....Δ	$129.95	69.95

International Ant (IAC)

160m double Bazooka 248' antenna	$195.95
80m double Bazooka 121' antenna	135.95
40m double Bazooka 64' antenna	115.95

ISOTRON (ISO)

160C 160m 9.5' x 16" x 15" 100 KHz bandwidth ant	$169.95
80 80m 32" x 16" x 15" 110 KHz bandwidth ant	95.95
40 40m 22" x 16" x 15" 250 KHz bandwidth ant	85.95
20 20m 21" x 8" x 4" 350 KHz bandwidth ant	74.95
15 15m 21" x 1.5" x 4" 450 KHz bandwidth ant	64.95
10 10m 16" x 1.5" x 4" 1 MHz bandwidth ant	64.95
6 6m 16.5" x 2" x 4" 1.25 MHz bandwidth ant	69.95
80/40 Combo* 80/40m 32" x 16" x 30" ant .	168.95
20/15/10 Combo* 20/15/20m combo ant	187.95

*Coaxial "T's" & jumpers required for combos - not included

JPS (JPS)

	Reg	Sale
ANC-4 Antenna noise canceller .....D	$195.00	189.95
NIR-12 Dual DSP noise reduction/filt unit ..D	375.00	349.95
SDK-12 Soft development kit; NIR-12 .....D	35.95	29.95
NRF-7 Noise reducer and filter unit.....D	219.95	159.95
Power Pack 115vac/12vdc adapter .....D	16.95	14.95

JSC (JSC)

JRR-520 5-wire rotor cable .....Δ, per ft.	14¢
JRR-520 .....Δ, 100 ft. Roll	12.95
JRR-520 .....Δ, 500 ft. Roll	44.95
JRR-520 .....Δ, 1000 ft. Roll	79.95

K-COM (KCO)

RF-1 Modular telephone 3-30 MHz RFI filter .	$ 16.95
RF-1/Low Modular phone .5-3 MHz RFI filter	16.95
RF-1/2-line 2-line modular 3-30 MHz RFI filt	22.95
RF-1/coiled Coiled cord modular 3-30MHz filt	22.95
RF-2 Hard-wired telephone 3-30 MHz RFI filt	10.95

KC Tracker (See GRACE)

KLM (KLM)

2M-14CM 2m circ 14 el beam, no switcher Δ	$169.00	129.95
2M-16LBXM 2m 16 el beam, 28' bm, 14.5db Δ	244.00	169.95
432-30LBX 432 30 el beam, 22'bm, 17.3db Δ	222.00	149.95
440-2N 432 MHz - for 2 ants, w/type N .....Δ	81.95	49.95

KACHINA (KAC)

505-DSP/505-AT2 PC HF Xcvr/tuner installed	2419.95	2199.95
505-AA Amp adapt; other than 12vdc spec ord	45.95	
505-ECH External cover for control head ...	25.95	
505-MB Mobile mount bracket	40.95	
505-SM Rubber shock mounts; 505-MB .	20.95	
505-RC Rem cont interface; need 2 spec ord	298.95	
505-TK Tuning knob; need serial port spec order	199.95	
970055 25' control head cable	49.95	
970056 75' control head cable	89.95	
970057 25' RS-232 cable	16.95	
970058 75' RS-232 cable	37.95	

KANTRONICS (KAN)

Data Engine TNC w/no modems .....D	$319.95	169.95
Data Engine w/DE-1200 modem .....D	389.95	199.95
GPS Tracker GPS/active ant/KPC-3 Plus pack ..m	649.00	599.95
KPC-3 Plus/128K Small packet TNC/128K RAM	179.95	
KPC-3 Plus User's Guide (comes w/KPC3+) Δ	24.95	19.95
KPC-9612 Plus/128K 9600 controller/128K ...	369.95	
128K 128K memory upgrade; KPC-3/9612 .	24.95	
KAM Plus All Mode Communicator .....D	389.95	369.95
KAM 98 Single port multi-mode dig controller	449.00	399.95
12VDC Adaptor 300ma adapt; KAM Plus/KPC3	9.95	
Host Master II+ IBM software	89.95	
Package 1 Enhancement board; KAM	119.95	
Package 3 Upgrade; KAM Plus	59.95	
Pacterm 98 CSS Software; Kan TNCs	79.95	
Superfax II WX FAX program for IBM	59.95	
APRS adapter cable; GPS to Kantronics TNC .	32.95	
G-TOR Book .....Δ	16.95	14.95
K-1 1w 2m transmitter kit .....D	89.95	69.95
Pager Handbook for the Radio Amateur .....Δ	16.95	14.95

KENWOOD (KEN)

TS-950SDX Dlx Xcvr w/keyer/DSP/filters	5299.95	3999.95
DRU-2 Digital recording unit	149.95	139.95
MC-43S Extra 8-pin hand mic w/up-down .	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-90 2-head DSP desk microphone	269.95	239.95
SP-950 External spkr w/audio filters	159.95	149.95
VS-2 Voice synthesizer	69.95	
YG-455CN-1 250 Hz CW filter (2nd IF) ....D	179.95	99.95
YK-88CN-1 270 Hz CW filter (1st IF)	139.95	129.95
YK-88SN-1 1.8 KHz SSB filter (1st IF)	139.95	129.95

KENWOOD - continued

TS-870S 9-band Xcvr/Rcvr/IFDSP/tuner ....†	3199.95	2299.95
PS-40 Switching power supply	229.95	199.95
PS-52 Heavy duty power supply	309.95	269.95
DRU-3A Dig recording unit; TS-870/570	139.95	129.95
MC-43S Extra 8-pin hand mic w/up-down .	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-90 2-head DSP desk microphone	269.95	239.95
SO-2 TCXO unit	189.95	179.95
SP-31 External speaker	99.95	
VS-2 Voice synthesizer	69.95	
TS-570D(G) 9-band Xcvr/Rcv/AFDSP/tuner/mic †	1749.95	1099.95
TS-570S(G) 9-band Xcv/6m/Rcv/AFDSP/tune/mic †	2069.95	1349.95
PS-40 Switching power supply	229.95	199.95
PS-53 Heavy duty 22.5A power supply	289.95	249.95
DRU-3A Dig recording unit; TS-570/870	139.95	129.95
KSS Sky command system; 570/870 .special order	1177.85	899.95
MB-430 Mobile mounting bracket	49.95	
MC-43S 8-pin hand mic w/up-down	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-90 2-head DSP desk microphone	269.95	239.95
PG-2Z Heavy duty DC cable	37.95	
SO-2 TCXO unit	189.95	179.95
SP-23 External speaker	89.95	
VS-3 Voice synthesizer	39.95	
YK-88C-1 500 Hz CW filter	139.95	129.95
YK-88CN-1 270 Hz CW filter	139.95	129.95
YK-88SN-1 1.8 KHz SSB filter	139.95	129.95
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt †	1169.95	769.95
PS-40 Switching power supply	229.95	199.95
PS-53 Heavy duty 22.5A power supply	289.95	249.95
AT-50 External HF auto tuner	379.95	329.95
PG-4M 18' extension cable for AT-50	29.95	
IF-10D Computer interface	89.95	
MB-13 Deluxe quick release mobile mt ...D	55.95	29.95
MC-47 Extra multi-func 8-pin hand mic ...	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
PG-2Y DC cable	39.95	
SO-2 TCXO unit	189.95	179.95
SP-23 External speaker	89.95	
TC-50/50Case Travel case for TS-50S/60S	89.95	
YK-107C 500 Hz CW filter	139.95	129.95
7-pin DIN plug	4.95	
8-pin DIN plug	6.95	
13-pin DIN plug	9.95	
DFK-7A Dlx 22' rem cbl kit; 255A/455A .....Δ	99.95	69.95
E30-1765-08 Adapt cord; MC-85 - 8-pin Xcvr	21.95	
HS-5 Deluxe headphones	79.95	
HS-6 Lightweight headphones	59.95	
LF-30A 1kw PEP low pass filter	64.95	
MC-43S 8-pin hand mic w/up-down switch ..	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down ...	119.95	109.95
PG-3B 15A DC line noise filter	29.95	
PG-3G 25A DC line noise filter	51.95	
SP-50B High quality external mobile speaker	55.95	
TSU-5 Prog CTCSS decoder; TS-790A .....Δ	64.95	
TU-7 Prog encoder; 2550/751A/TW-4100A .Δ	54.95	
TU-8 CTCSS tone unit; TS-450S/690S .....Δ	54.95	
UT-10 10w 1.2 GHz module; TS-790A .....Δ	629.95	549.95
VP-1 Hvy duty chrome spg, bpr mt for MA-5 D	64.95	19.95
YG-455C-1 500 Hz CW filter; TS-450/690 ..Δ	169.95	149.95
YK-88CN 270 Hz CW filter; R-5000 .....D	104.95	69.95
YK-88S-1 2.4 KHz SSB filter; TS-450/690 ...D	139.95	69.95
YK-455C-1 500 Hz CW filter; TS-140S .....D	114.95	99.95
TM-642AD 2m/220 FM Xcvr/backlit TTP mic	989.95	739.95
TM-742AD 50/35w 2m/440FM/backlit TT mic †	959.95	649.95
MFJ 916 duplexer FREE with TM-742AD! Limited Time!		
DFK-3 9' separate display cable kit	26.95	
DFK-4 13' remote cable kit	59.95	
DFK-7 Deluxe 22' remote cable kit	89.95	

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KENWOOD - continued

	Reg	Sale
MB-14 Quick release mobile mount .....D	49.95	29.95
MJ-88 Modular to 8-pin mic adapter	30.95	
MJ-89 Modular mic switch	69.95	
TSU-7 CTCSS decoder unit	59.95	
UT-50S 50w 6m unit	379.95	329.95
UT-220S 25w 220 MHz unit	379.95	329.95
UT-440S 35w 440 MHz unit	339.95	299.95
UT-1200 10w 1.2 GHz unit	459.95	399.95
DFK-3B 9' sep disp cable kit; TM-733A .....D	39.95	29.95
DFK-4B 13' rem cable kit; TM-733A .....D	60.95	39.95
DFK-7B Dlx 22' rem cbl kit; TM-733A .....D	99.95	59.95
TM-G707A 50w 2m/35w 440 FM/TTP mic ..†	519.95	339.95
TM-V7A 50w 2m/35w 440 FM Xcvr/TTP mic †	719.95	459.95
DFK-3C 9' separate display cable kit	44.95	
DFK-4C 13' remote cable kit	64.95	
DFK-7C Deluxe 23' remote cable kit	99.95	
MJ-88 Modular to 8-pin mic adapter	30.95	
MJ-89 Modular mic switch	69.95	
PG-4S PC interface cable	32.95	
PG-5A Packet data cable	15.95	
VS-3 Voice synthesizer	39.95	
MA-700 3db 2m/5.5db 440 ant w/duplexer D	109.95	99.95
Larsen **PO-K** Roof mt, coax; MA-700	25.95	
Larsen **PO-MM** Magnet mt, coax; MA-700 ..	31.95	
Larsen **PO-TLM** Tnk lip mt, coax; MA-700 D	27.95	24.95
TM-331A 25w 220 FM Xcvr w/TTP mic	579.95	499.95
KQT-8/TSU-6 Prog CTCSS decoder	49.95	
TM-541A 10w 1.2 GHz FM Xcvr/TTP/encoder	579.95	449.95
DTU-2 Digital paging unit .....D	32.95	19.95
KQT-8/TSU-6 Prog CTCSS decoder	49.95	
TM-261A 50w 2m FM Xcvr w/TTP mic .....†	379.95	179.95
TM-461A 35w 440 FM Xcvr w/TTP mic	509.95	439.95
TSU-8 CTCSS decoder	59.95	
MC-45DM Extra multi-function TTP mic	79.95	
MC-52DM Back-lit TTP mic;241/331/441/541 ..	79.95	
MC-53DM Back-lit TTP mic;251/733/742/255/V7A	79.95	

Accessory for TH-75A/77A/25AT/26AT

PG-3E Cig cord w/filter for DC-1 .....D	$ 35.95	19.95

Accessories for TH-28A/48A/78A

BC-15A Rapid cgr; PB-13/14/17/18 .....D	$119.95	19.95
ME-1 Memory expansion; also for TM-251A D	39.95	9.95
SC-33 Soft case; TH-28A/48A/PB-13/BT-8 ..D	24.95	9.95
SC-34 Soft case; TH-28A/48A/PB-17/18 .....D	24.95	19.95
SC-35 Regular soft case; TH-78A .....D	24.95	99¢
SC-36 Large soft case; TH-78A .....D	24.95	99¢
TH-22ATH 5w 2m FM HT/batt/KSC-8A/TTP ..	324.95	229.95
TH-42AT 2.5w 440 FM HT/batt/cgr/TTP ....Δ	399.95	269.95
TH-79AKSS 5w 2m/440 HT/batt/cgr/TTP	579.95	379.95
BH-6 Swivel mount	39.95	
BT-9 4-AA battery holder	29.95	
EMC-3 Lapel clip mic/ear piece	29.95	
HMC-3 VOX/boom mic headset	59.95	
KSC-8A Drop-in cgr; 25/26/75/77/22/42/79	26.95	
KSC-14 2-pack rapid charger	87.95	
PB-33 1200ma 6v battery	89.95	
PB-34 600ma 9.6v (5w) battery	89.95	
PG-2W DC cable w/fuse	17.95	
PG-3J Cig lighter cord w/filter	36.95	
PG-4R SkyCommand II cbl; 79AKSS/570/870	79.95	
SC-41 Soft case; TH-79A(D) w/PB-32 .....D	24.95	9.95
SC-43 Soft case; TH-79A(D) w/PB-33/34 D	24.95	9.95
SMC-32 Mini water resist rt angle spkr/mic .	52.95	
SMC-33 Speaker/mic w/remote control	65.95	
SMC-34 Spkr/mic w/vol cont/function keys	39.95	
TSU-8 CTCSS decoder; TH-22/42AT	59.95	
WR-2 Water resistant bag; TH-22/42AT	29.95	
TH-G71A 5w 2m/440 FM HT/batt/cgr/TTP .†	429.95	269.95
TH-D7A 5w 2m/440 FM HT/1200/9600 TNC †	519.95	439.95
BC-19 Rapid charger	64.95	
BT-11 4-AA battery holder	17.95	
EMC-3 Lapel clip mic/ear piece	29.95	
HMC-3 VOX/boom mic headset	59.95	
J29-0631-13 Belt clip for batt; D7A/G71A .	4.95	

KENWOOD - continued

	Reg	Sale
PB-38 650ma 6v battery	44.95	
PB-39 600ma 9.6v (5w) battery	57.95	
PG-2W DC cable w/fuse	17.95	
PG-3J Cig lighter cord w/filter	36.95	
PG-4P Computer control cable; TH-G71A ..	32.95	
PG-4R SkyCommand II cable; D7A/570/870	79.95	
PG-4V VC-H1 connection cable TH-D7A	49.95	
PG-4W PC connection cable; TH-D7A	55.95	
SC-45 Soft case for TH-G71A/PB-38/39	15.95	
SC-47B Black soft case for TH-D7A	15.95	
SC-470R Orange soft case for TH-D7A	15.95	
SMC-32 Mini water resist rt angle spkr/mic .	52.95	
SMC-33 Speaker/mic w/remote control	65.95	
SMC-34 Spkr/mic w/vol cont/function keys	39.95	
WR-2 Water resistant bag; TH-G71A	29.95	
BT-10 6 AA alk batt case; TH-235A .....D	13.95	4.95
PB-36 7.2v 950ma nicad batt; TH-235A ....D	49.95	9.95
PB-37 12v 950ma (5w) nicad; TH-235A .....D	57.95	19.95
EZ-PASS WIN 95 No-code tech study package	34.95	
Primer Welcome to Amateur Radio primer	2.00	50¢
VC-H1 Visual Communicator SSTV unit ....†	584.95	349.95
E30-3352-08 16-pin DIN/unterminated cbl	44.95	
E59-0407-08 16-pin DIN plug only	29.95	
KCT-24S VCH-1 to PC software/cable	58.95	
PG-4T VC-H1 to Kenwood FM mobile cable	49.95	
SC-46P Protective case	18.95	
VC-IS Software w/cable for VC-H1 to PC .D	40.95	29.95
EK-AMA1 Portable emergency kit special order	7800.00	5399.95

CONSUMER ELECTRONICS

TKM-707 150w HF marine SSB Xcvr spec order	2249.95	1249.95
KAT-1 HF marine auto ant tuner ...spec order	999.95	569.95
UBZ-LF14 Family radio svc black handheld .D	149.95	79.95
UBZ-LH14BK Family radio svc black handheld	134.95	99.95
EMC-3 Label clip mic/ear piece	29.95	
HMC-3 VOX/boom mic headset	59.95	
SMC-34 Spkr/mic/vol cont/function keys ...	39.95	
UBC-3 Nicad desk charger	36.95	
UPB-2 Nicad battery pack	24.95	
USC-4B Black nylon case; UBZ-LF14 .....Δ	15.95	
USC-5B Black nylon case; UBZ-LH14BK	15.95	
UBZ-AL14BK Family radio svc black handheld	59.95	49.95

KOSS (KOS)

GT/3 Stereophone w/covered headband .....D	$ 14.99	7.95
GT/4 Stereophone w/volume control .....D	19.99	12.95
HD/30 Dual amplified stereo speakers .....D	29.99	19.95
HD/33 Computer stereophone/vol control ....Δ	14.99	6.95
HP/6 Port stereophone w/vol/adj headband ..	9.99	
KTX/2 Portable stereophone w/adj headband	9.99	
KTX/4 Collapsible stereophone w/vol control .	14.99	
QZ/99 Noise reduction stereoph w/mono sw .	59.99	
QZ/2000 Active noise reduction stereophone	199.99	179.95
SB/30 Communications headset w/mic	49.99	
SP/5 Sidefiring yellow stereophone	7.99	
SW/5 Single communications headset	14.99	

LARSEN (LAR)

27-31 MHz ANTENNA

NMO-27C 10m ant only (no mount)	$ 33.95

47-54 MHz ANTENNA

NMO-50B 6m black ant only (no mount)	$ 36.95
NMO-50C 6m ant only (no mount)	33.95

144-174 MHz ANTENNAS

NMO-150B 2m black ant only (no mt), 3 db .	$ 33.95
NMO-150C 2m ant only (no mount), 3 db	30.95

220-265 MHz ANTENNAS

NMO-220B 220 black ant only (no mt), 3 db	$ 36.95
NMO-220C 220 ant only (no mount), 3 db	30.95

440-460 MHz ANTENNAS

NMO-440B 440 black ant only (no mt), 5 db	$ 35.95
NMO-440C 440 ant only (no mount), 5 db	29.95
MM-2/70 2m/440 ¼ wave/2db mag mt ant ..	44.95
NMO-2/70B 2m/440 blk ant only (no mt), 2/4db ...	58.95

LARSEN - continued

	Reg	Sale
NMO-2/70C 2m/440 ant (no mount), 2/4db ...	53.95	
NMO-2/70-SH 2m/440 ant (no mt), ¼ wv/2db	35.95	
NMO-012 135-160/148-173 2.5db (no mt) .....D	50.95	24.95
NMOQ-Spec 136-512 MHz ¼ wave ant (no mt)	11.95	
NMOQ-Spec-B 136-512 black ¼ wv ant (no mt)	14.95	
NMOQ-Spec-K 136-512MHz ¼ wv ¾" hole ant	24.95	
NMOQ-2/70-B 2m/440 ¼ wv cell look ant (no mt)	32.95	
NMO-1290B 1.2 GHz black ant only (no mt) D	32.95	24.95
FB1-136 Base station 136-230 MHz ant ....Δ	144.75	69.95

ON GLASS ANTENNAS

KG-144-UD-PL 2m 3 db on glass antenna ...	$ 73.95
KG-220-UD-PL 220 3 db on glass antenna ..	74.95
KG-440-UD-PL 440 2.4 db on glass antenna	61.95
KG-2/70-CX-PL 2m/440 2.5/4.5db on glass .	99.95
KG-Reinstall Reinstall kit for KG-ants	5.95

KULDUCKIES - For Hand-helds

KD4-146 2m BNC Kulduckie	$ 18.95
KD4-2/70 2m/440 BNC Kulduckie	29.95
KD4-222 220 BNC Kulduckie	18.95
KD14-445 440 ¼ wave BNC Kulduckie	18.95
KD4-146-HQ 2m part helical, part ¼ wave BNC	23.95
KD14-2M-HW 2m ½ wave BNC antenna	35.95
KD14-440-HW 440 ½ wave BNC antenna	35.95

ACCESSORIES & REPLACEMENT PARTS

A-7 Adapter for NMO ant on NLA mount ..... D	$ 8.95	
BSA-K Base mounting kit for mobile ant	49.95	
NMO-B38 NMO mt hdw/A-7 NLA adapter	13.95	
NMO-CAP-B Black rain cap for NMO mount ..	4.95	
NMO-K ¾" hole mt w/coax for NMO ant	13.95	
NMO-MM Magnet mt, coax for NMO ant	30.95	
NMO-TLP Low profile tnk lid mt, coax; NMO ant	27.95	
PO-K Roof mt, coax for SO-239 ant	26.95	
PO-MM Magnet mt, coax for SO-239 ant	33.95	
PO-TLM Trunk lip mt, coax for SO-239 ant .D	27.95	24.95
RG-SS Extra super seal NMO gaskets (3)	3.95	
SPRING Shock spring	8.95	
TMB-34 Trunk mtg bkt for NMO antenna	4.95	
TMB-34B Black trunk mtg bkt for NMO ant ..	7.95	
W-2/70B 2m/440 black replacement whip ...	24.95	
W-490 49" replacement whip	9.95	
W-490B Black 49" replacement whip	12.95	

LOGSAT (LOG)

Logsat Professional Satellite tracking CDROM	$ 69.95

M² (MSQ)

7&10-30LP8 7&10-30MHz 6db 8el 29'7" bm LP T*	1289.95
10-30LP8 10-30MHz 6db 8el 29'7" bm LP T*	1159.95
17-30LP7DX 17-30MHz 6.5db 7el 23'8" boom LP	799.95
40M-1LDX 6.9-10 MHz rotatable dipole	419.95
20M-4DX 20m 7.4db 4el 34' boom beam	529.95
17M-5DX 17m 8.6db 5el 36' boom beam	529.95
17M-3DX 17m 6.3db 3el 18' boom beam	399.95
15M-4DX 15m 8.5db 4el 33' 8" boom beam .	449.95
12M-4DX 12m 8.6db 4el 27' boom beam	399.95
10M-4DX 10m 8.7db 4el 23' boom beam	399.95
6M-3 6m 50-50.6 or 51-54 6.4db 3el 6'9" bm beam	119.95
6M-5 6m 50-50.5 9.4db 5el 15'10"boom ...D	199.95
6M-5X 6m 50-50.5 or 51-54 9.4db 5el 18' bm beam	199.95
6M-7 6m 49.5-50.5 10.5db 7el 26'9" bm beam	289.95
6M-7JHV 6m 50-50.4 10.9db 7el 30'8"bm beam	249.95
6M-2WLC 6m 49.7-50.5 11.9db 9el 39' 6" boom T*	439.95
6M-9KHW 6m 50-50.4 12.7db 9el 49' 4" bm beam	529.95
6M-11JKV 6m 50-50.4 14db 11el 69'bm beam T*	749.95
6M-HO-LOOP 6m 50-50.3 4.4db horiz loop ant	89.95
MAST BKT KIT For 6M-HO-LOOP	15.95
2M-4 2m 7.5db 4el 4' boom beam	89.95
2M-7 2m 10.3db 7el 8'10" boom beam	109.95
2M-9FM 2m 145-148 12db 9el 14' 6" bm beam	119.95
2M-9SSB 2m 144-146 12db 9el 14' 6" bm beam	119.95
2M-12 2m 12.8db 12el 19'6" boom beam	159.95
2M-5WL 2m 14.8db 17el 33' boom beam	199.95
2M-18XXX 2m 144-146 15.3db 18el 36'3" bm beam	229.95

M² - continued

	Reg	Sale
2M-8WLHD 2m 144-144.7 17db 21el 55' bm beam	529.95	
2M-CP14 2m 10.3db 7h/7v 10'6"bm circ beam	169.95	
2M-CP22 2m 12.5db 11h/11v 18'6"bm circ beam	229.95	
FG X-Boom Kit For circular antennas, etc.	119.95	
2M-XP20 2m 144-146 13.3db 14h/14v 21'6"bm cross pol	199.95	
2M5-440XP 2m/440 9/12db 5/10el 5'8" bm beam	159.95	
2M-HO-LOOP 2m 144-144.5 4.86db horiz loop	39.95	
Big-Foot 4x-mag mt; 2M-HO-LOOP stack/etc	99.95	
MAG-KIT Magnet mt kit; single 2m-HO-LOOP	20.95	
MAST BKT KIT For 2M-HO-LOOP	15.95	
STACK-KIT Stack kit for 2 2m-HO-LOOP's	61.95	
TOP BKT KIT For 2M-HO-LOOP	20.95	
EB-144 2m Eggbeater omni/hor/rhc overhead	129.95	
RK-2M 2m 6db overhead reflector kit/base mt	37.95	
222-7EZ 220 9.8db 7el 5' 8" boom beam	89.95	
222-10EZ 220 12db 10el 9' 9" boom beam	99.95	
222-5WL 220 15.2db 15el 23'3" boom beam	159.95	
222-7WL 220 16.4db 23el 32'5" boom beam	199.95	
222-HO-LOOP 220-224 4.75db horiz loop ant	39.95	
MAG-KIT Magnet mt kit; single 222-HO-LOOP	20.95	
440-470-5W 440-470 7.8db 5el 2'2"bm beam	129.95	
420-50-11 432 11.3db 11el 5' bm rear mt beam	89.95	
440-18 432 14.5db 18el 11'4" boom beam	119.95	
440-21ATV 432 15.9db 21el 14'6" bm ATV beam	139.95	
432-9WL 432 17.3db 28el 21' boom beam	169.95	
432-13WLA 432 18.6db 38el 30'8" bm beam	229.95	
436-CP30 432 14.5db 15h/15v 9'9"bm circ beam	229.95	
436-CP42UG 432 16.8db 21h/21v 18'10"bm circ	269.95	
FG X-Boom Kit For circular antennas, etc.	129.95	
432-HO-LOOP 430-436 5db horiz loop ant	39.95	
Big-Foot 4x-mag mt; 432-HO-LOOP stack/etc	99.95	
MAG-KIT Mag mt kit; single 432-HO-LOOP	20.95	
STACK-KIT-70CM Stack kit; 2 432-HO-LOOP's	61.95	
TOP BKT KIT For 432-HO-LOOP	20.95	
EB-432 432 Eggbeater omni/hor/rhc overhead	119.95	
RK-70CM 432 6db overhead reflector kit/base mt	37.95	
902-6W 900MHz 10db 6el 2' boom beam	59.95	
902-10EZ 900MHz 12.6db 10el 3'5"bm beam	89.95	
902-18EZ 900MHz 14.8db 18el 5'4"bm beam	129.95	
23CM-22EZ 1.2GHz 16db 22el 5'2" bm beam	89.95	
23CM-35 1.2GHz 18.4db 35el 10' bm beam	149.95	
2M-2-Port-PD 2m 2-port type N power divider	59.95	
70CM-2-Port-PD 432 2-port N power divider	59.95	
23CM-2-Port-PD 1.2GHz 2-port N power divider	59.95	
OR-2800PDC 35 sq ft azimuth rotor w/control box	1429.95	
RC-2800PDC Control box only special order	395.95	
RC-2800PP Control box; prop pitch spec order	499.95	
FAST MAST 20' extended portable alum mast	159.95	

***These items are drop-shipped (shipped direct to you from the M² factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Fresno, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order items.**

MFJ ANTENNA TUNERS (MFJ)

	Reg	Sale
989C Dlx 3kw PEP w/roller inductor	$359.95	319.95
986 3kw PEP w/roller inductor	329.95	299.95
962D 1.5kw PEP/meter/switch/balun/roller ind	269.95	249.95
969 HF & 6m 300w roller inductor tuner	199.95	189.95
949E 300w/meter/dummy/sw/balun	149.95	139.95
1312C 12vdc 300ma ps 2.5mm coaxial; 949E	14.95	
948 300w/meter/switch/balun	129.95	119.95
941E 300w tuner w/meter, switch, balun	119.95	109.95
945E 300w tuner w/meter plus 6m	109.95	99.95
20 Mobile bracket for 945E	4.95	
901B Versa Tuner 200w ant tuner	79.95	
910 80-10m mobile antenna matcher	19.95	
1601O 200w random wire tuner	49.95	
903 6m antenna tuner	49.95	
906 6m antenna tuner w/wattmeter	79.95	
914 Auto tuner extender	59.95	

MFJ - continued

	Reg	Sale
921 2m/220 300w PEP tuner/SWR/wattmeter	69.95	
922 2m/440 150w tuner/SWR/wattmeter	79.95	
924 440 MHz 300w PEP tuner/SWR/wattmeter	69.95	
934 300w tuner w/artificial ground	179.95	169.95
940A 10m antenna tuner/SWR/wattmeter	79.95	

MEMORY KEYERS

	Reg	Sale
451 Dedicated CW keyboard w/memory	$109.95	99.95
451X Morse keyboard interface only	89.95	
452 CW keyboard/keyer w/disp/keyboard	139.95	129.95
452X CW keyboard/keyer w/disp, no keyboard	109.95	99.95
498 Dlx CW keyboard/keyer w/disp/keyboard	189.95	179.95
498X Dlx CW keyboard w/disp, no keyboard	169.95	159.95
490 492 keyer/Bencher paddle combination	184.95	174.95
490X 492 keyer for use w/Bencher or 564	109.95	99.95
564 Deluxe iambic paddle for 490X	49.95	
492 192 char menu driven memory keyer	99.95	89.95
80 8000 char memory expansion for 492	19.95	
492X Memory keyer w/8000 char expansion	114.95	104.95
78 Remote control for 492/492X	29.95	
493 32K char menu driven mem keyer	139.95	129.95
79 Remote control for 493	29.95	
551 IBM AT-101 keyboard for 493	39.95	
5409 9-pin serial port 6' cable for 493	12.95	
5425 25-pin serial port 6' cable for 493	12.95	

ELECTRONIC KEYERS

	Reg	Sale
407D Deluxe electronic keyer	$ 69.95	
401D Econo keyer	49.95	

KEYER/PADDLES

	Reg	Sale
422D Keyer/Bencher paddle combination	$154.95	144.95
422DX Keyer only	79.95	
441 SlimLine econo keyer	59.95	
442 SlimLine keyer/Bencher paddle combo	159.95	149.95
442X SlimLine keyer only	89.95	
447 SlimLine deluxe keyer	79.95	
564 Deluxe iambic chrome paddle	49.95	
564B Deluxe iambic black paddle	49.95	

COMPUTER INTERFACES

	Reg	Sale
1224 Interface	$109.95	99.95
1265 Disk software for VIC/C64; 1224	19.95	
1285 Software for IBM; 1224	19.95	
1264B Tape software; VIC/C64; 1225 Δ	19.95	99¢
1265B Disk software; VIC/C64; 1225 Δ	19.95	99¢
1270C Packet radio TNC2	129.95	119.95
47A Mailbox 32K mem; 1270/1274 Δ	49.95	24.95
47B Mailbox 128K mem; 1270/1274 Δ	69.95	44.95
47C Mailbox 512K mem; 1270/1274 Δ	149.95	79.95
2400 2400 baud modem	29.95	
9600B 9600 baud modem	109.95	99.95
1270CT Turbo packet w/2400 baud	159.95	149.95
1270CQ Packet w/9600 baud modem	249.95	229.95
1276 Packet/Pactor controller	159.95	149.95
1276T Packet/Pactor Turbo controller	189.95	179.95
1278B Multi-mode controller w/Pactor	309.95	279.95
1278B/DSP Controller w/Pactor & DSP	389.95	359.95
45A 32K RAM IC only D	14.95	4.95
48 1278 upgrade	24.95	
48B 1278B upgrade	24.95	
48E 1278 packet encryption EPROM D	29.95	19.95
52 TNC2 deviation meter board	29.95	
56A Pactor/mailbox 32K board for 1278B	69.95	
56B Pactor/mailbox 128K board for 1278B	89.95	
56C Pactor/mailbox 512K board; 1278B	149.95	139.95
780 DSP data filter for 1278B	99.95	89.95
2400 2400 baud modem	29.95	
9600B 9600 baud modem	109.95	99.95
1278BT Turbo controller/2400/Pactor	339.95	309.95
1282 C64 starter pack	24.95	
1282B Multicom package; C64/128	39.95	
1282BD Multicom 64 disk only Δ	29.95	9.95
1284 5¼" IBM starter pack	24.95	
1284D 1284 disk only	14.95	
1284M 3½" IBM starter pack	24.95	

MFJ - continued

	Reg	Sale
1284MD 1284M disk only	14.95	
1284W MFJCOM for Windows	29.95	
1284WD 1284W disk only Δ	19.95	9.95
1287 Macintosh starter pack D	24.95	19.95
1287B Mac multicom starter pack	49.95	
1287D 1287 disk only D	14.95	4.95
1287BD 1287B disk only Δ	39.95	14.95
1288 Packet terminal program D	9.95	
1289 5¼" multicom software for IBM D	59.95	29.95
1289D 1289 disks only D	49.95	19.95
1289M 3½" multicom software for IBM	59.95	
1289MD 1289M disks only	49.95	
1289W Multicom for Windows with cable	59.95	
1289WD Multicom for Windows, less cable	49.95	
1293 JVFax/HamCom soft/FJ-1213 D	9.95	4.95
1214PC Multimode interface for IBM	149.95	139.95
59M 1214PC 3½" software upgrade D	29.95	24.95
40B TNC2 upgrade 32K/RAM D	29.95	6.95
40C TNC2 upgrade 32K	19.95	
40E TNC2 packet encryption EPROM D	29.95	6.95
43 Real time clock for TNC	19.95	
44 Plug-in scope tuning adapter	19.95	
52B FM deviation/temp/volt meter for TNC	39.95	
781 DSP filter for any TNC or controller	129.95	119.95
1271 Packet card for C64/128 D	49.95	39.95
1272B TNC to microphone interface	39.95	
1272BYH TNC/mic switch; KAM HF	39.95	
1272BYV TNC/mic switch; KAM VHF	39.95	
1272BZ TNC/mic switch; PK-88 Δ	39.95	9.95
1272M TNC/mic RJ-45 switch; MFJ/PK-900	39.95	
1272MYH TNC/mic RJ-45 switch; KAM HF	39.95	
1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3	39.95	
1273 Packet tuning indicator D	49.95	4.95

SSB/CW FILTERS

	Reg	Sale
722 SSB/CW notch filter	$ 79.95	
751B Super tunable CW audio filter	69.95	
752C Dual tunable SSB/CW filter	99.95	89.95
784B Deluxe tuneable DSP filter	249.95	229.95
5184 Cable pack for 784B	7.95	

PHONE PATCH

	Reg	Sale
624D Phone patch w/audio VU meter	$129.95	119.95

DUMMY LOADS

	Reg	Sale
250 2kw PEP dummy load w/oil	$ 59.95	
250X 2kw PEP dummy load, less oil	39.95	
21 1 gal industrial xfmr oil for wet dummy	24.95	
260C 300w 0-650 MHz dry dummy load	34.95	
260CN 300w 0-650 MHz type N dry dummy	39.95	
264 1.5kw 0-650 MHz dry dummy load	69.95	
264N 1.5kw 0-650 MHz type N dry dummy	79.95	

SWR/WATTMETERS

	Reg	Sale
812B 144-220 MHz SWR/FS/wattmeter	$ 34.95	
815B 160-6m cross-needle SWR/wattmeter	79.95	
816 1.8-30 MHz toroidal SWR/wattmeter	34.95	
817 2m/440 cross needle meter	89.95	
840 2m 5w wattmeter/dummy load for HT	19.95	
841 2m 5w in-line HT wattmeter/SWR	39.95	
844 Compact 2m/440 SWR/wattmeter	69.95	
860 1.8-60 MHz cross-needle meter	44.95	
862 2m/220/440 cross-needle meter	54.95	
864 1.8-60MHz/2m/440 cross needle meter	84.95	
870 1.6-60MHz Grandmaster SWR/wattmeter	134.95	124.95
872 1.8-200MHz Grandmaster SWR/wattmeter	94.95	
873 125-525MHz Grandmaster SWR/wattmeter	114.95	104.95
874 1.8-525MHz Grandmaster SWR/wattmeter	169.95	159.95

SHORTWAVE ACCESSORIES

	Reg	Sale
306 Car radio SWL converter	$ 89.95	
956 LW/MW/SW preselector/tuner	49.95	
959B Receiver ant tuner w/preamp	99.95	
1020B .3-30 MHz indoor active rcv ant	79.95	
1022 300KHz-200MHz active rcv antenna	49.95	
1024 .05-30 MHz outdoor active rcv ant	139.95	129.95
1040B Deluxe receiver preselector	99.95	
1045C Receiver preselector	69.95	

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BOOKS		
30 Golden Classics book	$ 9.95	
31 Oscar book	7.95	
32 Packet Made Easy book	9.95	
33 Mobile Handbook book	12.95	
35 World of Ham Radio book	7.95	
36 Shortwave Listeners Guide; Apts/Condos	9.95	
37 Ham Communications Circuit Files book	9.95	
38 Easy-up Antennas book	16.95	
3036 The Packet Radio Operators book	12.95	
3101 Fox Hunt Adventure book	7.95	
3210 Novice license guide	7.95	
3211 Tech Plus license guide	7.95	
3212 No code tech license guide	14.95	
3213 General license guide	7.95	
3214 Advanced license guide	7.95	
3215 Extra license guide	7.95	
3301 Troubleshooting Antenna & Feedlines book	12.95	
3302 73 Dipole and Long-Wire Antennas	12.95	
3303 73 Vertical, Beam, and Triangle Ants	12.95	
3305 Antennas & Transmission Lines book	19.95	
3400 Morse Code: Breaking the Barrier	19.95	
3502 Solid State QRP Projects	12.95	
3504 FET Principles, Experiments & Projects	16.95	
3506 Ferromagnetic-Core Design book	19.95	
3507 Practical RF Design Manual	19.95	
3508 Radio Components Handbook	29.95	
3509 Ladder Crystal Filters	19.95	
CLOCKS		
105C 24-hour quartz wall clock	$ 19.95	
107B 24-hour digital clock	9.95	
108B 24/12-hour dual disp digital clock	19.95	
112 Deluxe world map clock	24.95	
114B Giant LED desk/wall 24-hour clock	59.95	
115 DX'er 24-hour analog world wall clock	24.95	
116 24/12-hour LED clock/10 minute timer	14.95	
116DC 12/24-hour 12vdc LED clock	19.95	
118 Giant 24/12 hour LCD clock	24.95	
119 Giant 24/12 hour LCD/in temp clock ....D	49.95	39.95
119B Giant 24/12 hour LCD/in temp clock	49.95	
120 Monster atomic (WWV) clock/temp/humd	69.95	
125 Calendar 24-hour analog wall clock	29.95	
126 Multi-color 12-hr quartz wall/24-hr trim	24.95	
152 Thermo clock; in/out temp/24-hr clock	24.95	
181 24/12-hour world map wristwatch	39.95	
ANTENNAS		
343 1¼" hole mount for 3/8-24 whip	$ 9.95	
1402 2m/440 3/5.5db 16.5" 100w ant only	34.95	
1412 2m/440 3/5.5db 40" 200w ant only	49.95	
1422 2m/440 3.2/5.7db 41.5" 150w ant only	49.95	
1432 2m/440 5/7.6db 62.5" 150w ant only	69.95	
333BM 3.5" HiFlux NMO magnet mt	14.95	
333BS 3.5" HiFlux SO-239 magnet mt	14.95	
335BM 5" HiFlux NMO magnet mt	19.95	
335BS 5" HiFlux SO-239 magnet mt	19.95	
340 Mirror/luggage pipe clamp mount	34.95	
345 Trunk/hatchback lip mount	34.95	
1516 2m/440 15' vertical base antenna	104.95	94.95
1522 2m/440 5.5' vertical base antenna	89.95	
1524 2m/440 10' vertical base antenna	149.95	139.95
1526 2m/440 17' vertical base antenna	189.95	179.95
1526N 2m/440 17' N vertical base antenna	189.95	179.95
1532N 2m/440/1.2GHz 8.2' N vert base ant	129.95	119.95
1536 6m/2m/440 8.2' vertical base ant	154.95	144.95
1621 40-10m 54" portable ant w/tuner	89.95	
1710 2m ¾ wave telescopic antenna	9.95	
1712 2m/440 telescopic antenna	14.95	
1713 2m/440 SuperFlex Thin Duk HT ant	19.95	
1713S 2m/440 SuperFlex SMA Thin Duk ant	19.95	
1714 2m ½ wave telescopic antenna	16.95	
1715 2m/440 SuperFlex gain Thin Duk HT ant	24.95	
1715S 2m/440 SuperFlex gain SMA Thin Duk	24.95	
1716 2m/440 duck for HT	16.95	
1716S 2m/440 SMA duck for HT	16.95	

MFJ - continued

	Reg	Sale
1717 2m/2.15db 440 duck for HT	21.95	
1717S 2m/2.15db 440 SMA duck for HT	21.95	
1718 2m shorty duck for HT	12.95	
1719 2m/440/1.2GHz Midget Duck	19.95	
1719S 2m/440/1.2GHz SMA Midget Duck	19.95	
1721 2m HT UltraLite mag mt antenna	14.95	
1722 2m/440 HT UltraLite mag mt antenna	18.95	
1724B 2m/440 magnet mt antenna	16.95	
1728B 6m ¼ wv/2m ⅝ wv mag ant/PL259/BNC	29.95	
1727 10m magnet mt antenna	39.95	
1729 2m/440 magnet mt antenna	34.95	
1730 2m pocket roll-up vertical antenna	19.95	
1734 2m/440 2.6/6.3db glass mt antenna	39.95	
1736 6m J-Pole travel antenna	29.95	
1738 2m 2.6db glass mt antenna	29.95	
94 Remount kit for 1734/1738	4.95	
1740 2m ¼ wave ground plane ant	14.95	
1750 2m ⅝ wave ground plane ant	24.95	
1752 220 ⅝ wave ground plane ant	24.95	
1754 2m/440 ground plane antenna	29.95	
1756 6m DX vertical antenna	79.95	
1762 6m 6db 3 el 6' boom beam	79.95	
1763 2m 3el portable beam	39.95	
1764 2 & 6m dual ⅝ super gain base ant	49.95	
1768 2m/440 4/7 el beam antenna	79.95	
1778 G5RV 160-10m 102' ant (needs tuner)	39.95	
1782 Super Hi-Q 10-30 loop/basic control .Δ	339.95	259.95
1786 Super Hi-Q 10-30 MHz loop/dlx control .m	379.95	349.95
1312B 12vdc 300ma adapter; 1782/1786	14.95	
1793 80/40/20m vertical antenna	189.95	179.95
1796 40/20/15/10/6/2m 10' vertical ant	209.95	189.95
1798 80/40/30/20/17/15/12/10/6/2m 20' vert	289.95	269.95
1812 2m/440 foldover telescopic HT ant	19.95	
1816 2m/440 8.5" flexible/telescopic duck	19.95	
1817 2m/440 14.5" flexible/telescopic duck	24.95	
1824BB Cell look alike BNC scanner ant ....D	19.95	9.95
1828B Magnet mt BNC scanner antenna ...D	29.95	19.95
1828M Mag mt Motorola plug scan ant .....D	29.95	14.95
CABLES		
5020R MFJ TNC - Yaesu FT50R & compatibles	$ 15.95	
5020RYV KAM VHF/KPC3 - Yae FT50R/comp	15.95	
5022 MFJ TNC - Alinco/Standard HT cable	15.95	
5022X PK-232 - Alinco/Sta HT cable .....Δ	15.95	6.95
5022YV KAM VHF/KPC3 - Ali/Sta HT cable	15.95	
5024 MFJ TNC - Ico/Yae/Ali/RS HT cable	15.95	
5024B PK/PacComm/compatible - Ico/Yae/RS	15.95	
5024YV KAM VHF/KPC3 - Ico/Yae/Ali/RS HT cbl	15.95	
5024Z PK-88 - Ico/Yae/Ali/RS HT cbl .....D	14.95	4.95
5026 MFJ TNC - Kenwood HT cable	15.95	
5026X PK-232 - Kenwood HT cable .....Δ	15.95	6.95
5026YV KAM VHF/KPC3 - Kenwood HT cable	15.95	
5026Z PK-88 - Kenwood HT cable .....D	14.95	99¢
5060 MFJ TNC - Ken/Yae acc 6-pin mini DIN	19.95	
5060YQ KPC9612 - Ken/Yae acc 6pin mini DIN	19.95	
5060YV KAM VHF/KPC3 - Ke/Ya acc 6pin mni DIN	19.95	
5063 MFJ TNC - Icom HF acc 8-pin DIN	19.95	
5063YH KAM HF - Icom HF acc 8-pin DIN	19.95	
5064 MFJ TNC - Icom VHF acc 5-pin DIN ....D	19.95	14.95
5064YQ KPC9612 - Icom VHF 8-pin DIN	19.95	
5064YV KAM VHF/KPC3 - Ico VHF acc 8pin DIN	19.95	
5065 MFJ TNC - Ico IC-706 acc 13-pin DIN	19.95	
5065YH KAM HF - Ico IC-706 acc 13-pin DIN	19.95	
5065YV KAM VHF - Ico IC706 acc 13-pin DIN	19.95	
5066 MFJ TNC - Kenwood HF acc 13-pin DIN	19.95	
5066YH KAM HF - Ken HF acc 13-pin DIN	19.95	
5080 MFJ TNC - Yaesu 8-pin cable	15.95	
5080M MFJ TNC - Yaesu 8-pin modular	15.95	
5080MYV KAM VHF/KPC3 - Yae 2500M/7400H	15.95	
5080MZ PK-88 - Yae 2500M/7400H .....D	14.95	1.95
5080YH KAM HF port - Yaesu 8-pin cable	15.95	
5080YV KAM VHF/KPC3 - Yaesu 8-pin cable	15.95	
5080Z PK-88 - Yaesu 8-pin cable .....D	14.95	2.95
5082 Open end - 8-pin mic cable	9.95	
5084 MFJ TNC - Icom 8-pin cable	15.95	

MFJ - continued

	Reg	Sale
5084M MFJ TNC - Icom 8-pin modular	15.95	
5084MYH KAM HF - Icom 8-pin modular	15.95	
5084MYV KAM VHF/KPC3 - Icom 8-pin mod	15.95	
5084MZ PK-88 - Ico 8-pin modular .....D	14.95	2.95
5084YH KAM HF port - Icom 8-pin cable	15.95	
5084YV KAM VHF/KPC3 - Icom 8-pin cable	15.95	
5084Z PK-88 - Icom 8-pin cable .....D	14.95	1.95
5086 MFJ TNC - Kenwood/Alinco 8-pin cable	15.95	
5086M MFJ TNC - Kenwood 8-pin modular	15.95	
5086MYV KAM VHF/KPC3 - Ken 8-pin mod	15.95	
5086MZ PK-88 - Ken 8-pin modular .....D	14.95	99¢
5086YH KAM HF port - Ken/Ali 8-pin cable	15.95	
5086YV KAM VHF/KPC3 - Ken/Ali 8-pin cable	15.95	
5086Z PK-88 - Ken/Ali 8-pin cable .....D	14.95	2.95
5088M MFJ TNC - Radio Shack 8-pin modular	15.95	
5088MYV KAM VHF - RS 8-pin modular	15.95	
5088MZ PK-88 - RS 8-pin modular .....D	14.95	2.95
5205 5-pin DIN open end cable	4.95	
5208 Open end - Ico HF/VHF acc 8-pin DIN	9.95	
5213 Open end - Kenwood acc 13-pin DIN	9.95	
5220R Open end - Yaesu FT50R/compatibles	9.95	
5222 Open end - Ali split HT cable .....Δ	9.95	69¢
5224 Open end - Ico/Yae/Ali/RS HT cable	9.95	
5226 Open end - Kenwood HT cable	9.95	
5268 Open end - modular phone plug cable	9.95	
5412 IBM printer cable	9.95	
5413 RS-232 6' cable DB-25M-25F	9.95	
5414 RS-232 6' cable DB-25M-9F	9.95	
5803/10 3' coax jumper cable	4.95	
RADIOS/TRANSCEIVERS		
8100K Shortwave regenerative Rcvr kit	$ 69.95	
8100W Shortwave regenerative Rcvr wired	89.95	
8121 AM/FM/shortwave portable receiver	39.95	
8400K 2m receiver kit	79.95	
8400W 2m receiver wired	99.95	89.95
9606X 6m FM/data Xcvr w/mic	169.95	159.95
8621 VHF data radio w/145.01 MHz	129.95	119.95
8621X1 APRS ready VHF data radio/145.79 D	139.95	79.95
8621X2 APRS ready VHF data radio/144.39	149.95	139.95
8631 220 MHz data radio w/223.70 MHz	149.95	139.95
4110 Portable AC power supply	49.95	
5100 Data radio cable - MFJ/TAPR	15.95	
5100X Data radio cable - PK-232 .....Δ	15.95	6.95
5100YH Data radio cable - KPC-9612	15.95	
5100YV Data radio cable - KAM/KPC-3	15.95	
5100Z Data radio cable - PK-88 .....D	14.95	1.95
5106 Open end - 6pin mini Ken/Yae cable	4.95	
9015 5w 15m CW Xcvr	189.95	169.95
9017 5w 17m CW Xcvr	189.95	169.95
9020 5w 20m CW Xcvr	189.95	169.95
9030 5w 30m CW Xcvr	189.95	169.95
9040 5w 40m CW Xcvr	189.95	169.95
27 Handle for CW station	4.95	
412 Plug-in Curtis keyer	39.95	
726 Plug-in audio filter	29.95	
971 200w portable ant tuner w/meter	99.95	
1770 Portable 15m dipole	39.95	
1771 Portable 17m dipole	39.95	
1772 Portable 20m dipole	39.95	
1773 Portable 30m dipole	39.95	
1774 Portable 40m dipole	39.95	
4110 Portable AC power supply	49.95	
4114 Rechargeable power pack	69.95	
9115B 9015 Xcvr/tuner/ps/ant	364.80	329.95
9117B 9017 Xcvr/tuner/ps/ant	364.80	329.95
9120B 9020 Xcvr/971 tuner/4114 ps/1772 ant	364.80	329.95
9130B 9030 Xcvr/tuner/ps/ant	364.80	329.95
9140B 9040 Xcvr/971 tuner/4114 ps/1774 ant	364.80	329.95
9402X 7w PEP 2m SSB Xcvr w/mic	299.95	269.95
9406X 10w PEP 6m SSB Xcvr w/mic	269.95	249.95
9410X 20w PEP 10m SSB Xcvr w/mic	269.95	249.95
9420X 12w 20m SSB Xcvr w/mic	249.95	229.95
9440X 12w 40m SSB Xcvr w/mic	249.95	229.95

MFJ - continued

	Reg	Sale
9475X 12w 75m SSB Xcvr w/mic	249.95	229.95
415B SSB Xcvr CW adapter; 9420X/9440X	49.95	
416 CW adapter for 9402X/9406X/9410X	49.95	
971 200w HF portable ant tuner w/meter	99.95	
1770A 10m dipole for 9410X	39.95	
1776 6m dipole for 9406X	39.95	
4110 Portable AC power supply	49.95	
4114 Rechargeable power pack	69.95	

ACCESSORIES

1305 5vdc 300ma adapter D	$ 12.95	
1312 12vdc 300ma adapter, 2.5mm plug	14.95	
1312B 12vdc 300ma adapter, 2.1mm plug	14.95	
1312C 12vdc 300ma adapter; 2.5mm coaxial	14.95	
1315 12vdc 500ma adapter	14.95	
15 HamGear belt loop radio holder	14.95	
18 HamGear chest harness/cargo pocket	29.95	
92AA01 1300ma AA NiMH cell each	2.99	
92AA10 10-pack 1300ma AA NiMH cells	24.95	
201 1.5-250 MHz dip meter	119.95	109.95
202B RF noise bridge	59.95	
203 160-10m bandswitched dip meter	99.95	89.95
204B Antenna bridge	79.95	
206 Antenna current probe	79.95	
207 160-10m SWR analyzer	79.95	
208 2m SWR analyzer	79.95	
209 1.8-170 MHz SWR analyzer	139.95	129.95
212 MatchMaker tune up device	79.95	
214 Amplifier Saver	49.95	
216 Deluxe Amplifier Saver	59.95	
217 SWR analyzer, 30-50 MHz Δ	79.95	24.95
218 SWR analyzer, 150-170 MHz D	79.95	39.95
219B SWR analyzer, 440 MHz/N/SO-239 adapt	99.95	89.95
224 2m FM signal analyzer	159.95	149.95
229 270-480MHz SWR analyzer	169.95	159.95
249B 1.8-170 MHz SWR analy/LCD counter	239.95	219.95
68 249 to 259 upgrade kit D	29.95	
259B 1.8-170 MHz SWR analy/RF res meter	259.95	239.95
269 1.8-170+440 MHz SWR analy/RF res mtr	359.95	319.95
29 Padded carrying pouch; 209/249/259 D	19.95	14.95
29C Pouch w/window; 209/249/259B	24.95	
66 1.8-30/30-170 dip coils; 209/249B/259B	19.95	
92AA10 10-pack 1300ma AA NiMH cells	24.95	
99 Package of MFJ 29C/66/1315	54.95	
731 RFI filter for SWR analyzer	89.95	
1315 12vdc 500ma ps for SWR analyzers	14.95	
270 Guardian Angel 400w PEP lightning protect	29.95	
97 Gas tube plug for 270	9.95	
281 ClearTone comunications speaker	12.95	
285W Mini spkr/mic for Icom IC-W2A D	15.95	
285W(CC) Mini spkr/mic; Alinco credit card HTs	17.95	
286 Speaker mic; Kenwood	15.95	
287 Mini spkr/mic; Kenwood	15.95	
287L Mini spkr/mic L for Kenwood D	15.95	
288I Headset/mic; Icom/ADI/Sta/RS/older Yae	24.95	
288K Headset/mic for Kenwood	24.95	
288Y Headset/mic; Ico Q7/Yae FT10/50/VX1	24.95	
291I Earphone for Icom spkr/mic	4.95	
291K Earphone for Kenwood spkr/mic	4.95	
292I Earph/mic; Ico/older Yae/compatibles	17.95	
292K Earphone/mic for Kenwood HT	17.95	
292Y Earphone/mic; Ico Q7/Yae FT10/50/VX1	17.95	
293I Rubber flex earloop earbud/mic; Icom	24.95	
293K Rubber flex earloop earbud/mic; Kenwood	24.95	
293Y Rubber flex earloop earbud/mic; Yaesu	24.95	
295I Mini spkr/mic; Icom & compatible HT	15.95	
295Y Mini spkr/mic; Ico Q7/Yae FT10/50/VX1	15.95	
296I Spkr/mic w/vol control, PTT lock; Icom	19.95	
298I Vox spkr/mic; ADI/Ali/Ico/RS/Sta/Yae	39.95	
310 BNC HT antenna window mount clip	14.95	
312 BNC HATennaClip antenna mount	14.95	
315 Universal Gripmatic HT mount holder	14.95	
323 Keep-it-up battery maintainer D	59.95	9.95
341M 17' antenna cable; NMO	19.95	
341S 17' antenna cable; SO-239	19.95	

MFJ - continued

	Reg	Sale
346 600 MHz LCD frequency counter D	189.95	89.95
382 Deluxe amplified communications spkr	39.95	
384 Dlx amp spkr w/speech control knob	29.95	
392 Deluxe communication headphones	19.95	
396 Boom mic/headphones	79.95	
5396I Adapter for 396 with Icom Xcvr	15.95	
5396K Adapter for 396 with Kenwood Xcvr	15.95	
5396Y Adapter for 396 with Yaesu Xcvr	15.95	
411 Personal Morse Code Tutor D	69.95	49.95
413 Basic Code Tutor	39.95	
414 Professional Morse Tutor w/LCD	199.95	189.95
417 Code Tutor with QSO	59.95	
418 Code Tutor with LCD display	79.95	
26 Carrying pouch for 418	12.95	
432 Voice Memory Keyer D	119.95	109.95
434 Deluxe Voice Memory Keyer	179.95	169.95
73 Remote control head w/cable for 434	29.95	
462B RTTY/ASCII/CW/AMTOR Rcvr multi-reader	179.95	169.95
5162 Receiver cable for 462B	4.95	
550 Hand key	7.95	
552 CW interface for 2m HT	79.95	
554 Deluxe CW practice oscillator	79.95	
554X Dlx oscillator w/281 spkr/550 key	99.95	
557 Code oscillator w/key	29.95	
631 Trickle wall charger; NiMH/nicad AA	9.95	
632 Rapid charger; NiMH/nicad AA/AAA	19.95	
641-I2 Battery charger; Icom BP-131/132	49.95	
10-BCI-2 Charger cup; Icom BP-131/132	12.95	
641-I3 Battery charger; Icom BP-173/180	49.95	
10-BCI-3 Charger cup; Icom BP-173/180	12.95	
641-K Battery charger for Kenwood	49.95	
641-Y2 Batt cgr;Yaesu FNB-10/11/12/17/27	49.95	
10-BCY-2 Cgr cup;Yae FNB-10/11/12/17/27	12.95	
641-Y3 Battery charger;Yaesu FNB-31/33	49.95	
10-BCY-3 Charger cup; Yaesu FNB-31/33	12.95	
641-Y4 Batt cgr;Yaesu FNB-40/41/V47/49	49.95	
10-BCY-4 Cgr cup;Yae FNB-40/41/V47/49	12.95	
662 Simplex pocket repeater	79.95	
701 Toroid RFI filters pack of 4	14.95	
702 200w low-pass filter	24.95	
704 1kw low-pass filter	49.95	
711 High pass filter	24.95	
713 2m HT intermod filter	59.95	
714 2m mobile intermod filter	59.95	
762 81db 170MHz BNC attenuator	69.95	
801 Super compact field strength meter	19.95	
802 Bipolar field strength meter	39.95	
802R Field strength remote meter	24.95	
802RX Field strength/remote meter combo	59.95	
805 RFI current detector meter	79.95	
850 AC line voltage monitor	19.95	
852 Power line noise current meter	99.95	89.95
886 Pocket frequency counter	119.95	109.95
912 W9INN remote balun	49.95	
916 2m/440 duplexer	29.95	
931 Artificial ground unit	89.95	
1025 Noise canceling antenna	159.95	149.95
1026 Deluxe noise canceling unit w/antenna	179.95	169.95
1046 1.6-33MHz receiver passive preselector	99.95	89.95
1048 1.6-33MHz Xcvr passive preselector	119.95	109.95
1112 Multiple DC outlet	34.95	
1116 Dlx multiple DC outlet	49.95	
1117 High current multiple DC outlet	49.95	
1118 Dlx high current multiple DC outlet	74.95	
1213 Interface for JVFAX/HamComm	49.95	
1266 C64 disk code tutor program D	19.95	2.95
76 1266/67 interface brd; kyr/keyboard D	19.95	99¢
1268 IBM PC memory keyer Δ	49.95	9.95
1269 IBM code tutor D	19.95	
1281 IBM Easy-DX logging program D	39.95	29.95
1292 Video digitizer for IBM Δ	199.95	69.95
1610 Novice theory tutor software; IBM D	29.95	6.95
1611 Tech theory tutor software; IBM D	29.95	6.95
1632 General theory tutor software; Mac D	29.95	9.95

MFJ - continued

	Reg	Sale
1634 Extra theory tutor software; Mac D	29.95	2.95
1635 No-code theory tutor software; Mac D	49.95	14.95
1680Y Windows software package; Yaesu D	109.95	49.95
1682 Packet Windows software D	29.95	19.95
1683I Rig Windows software for Icom	29.95	
5383I Icom Xcvr interface cable	49.95	
1683K Rig Windows software for Kenwood	29.95	
5383K Kenwood Xcvr interface cable	49.95	
1683Y Rig Windows software for Yaesu	29.95	
5383Y Yaesu interface cable, std 6-pin DIN	49.95	
5383YB Yaesu interface cable, mini 6-pin DIN	49.95	
1700B Combination ant/xmtr switch	79.95	
1701 6-position coax switch	49.95	
1702C 2-pos coax switch/lightning protect	24.95	
1702CN 2-pos 1.1GHz N switch/lightning protect	34.95	
1704 4-pos 500 MHz switch/lightning protect	64.95	
1704N 4-position type N switch	74.95	
4035MV Dlx 30A adjustable ps, 35A surge	149.95	139.95
4125MV MightyLite 22A 3.5 lb switch ps, 25A surge	109.95	99.95
4225MV MightyLite 22A switching ps, 25A surge	149.95	139.95
4245MV MightyLite 40A switching ps, 45A surge	199.95	189.95
5002 Digital/analog breadboard trainer spec order	349.95	329.95

MG Electronics (MGE)

HFS-1 10w mobile spkr, 3.5mm plug Δ		19.95

MAGELLAN (MAG)

	Reg	Sale
GPS-300 GPS receiver	$139.99	99.95
GPS-315 12 ch GPS receiver	209.99	149.95
GPS-320 12 ch GPS receiver	279.99	199.95
730275 External power cable w/cig adapter	14.99	
730277 PC cable/cig adapt; GPS-315/320	39.99	
GPS-2000XL 12 ch GPS receiver D	209.99	149.95
00-09018-000 PC ext power cig cable	14.99	
00-69007-000 External power/data module	49.99	
GPS ColorTRAK 12 ch color GPS/carry case	391.99	279.95
$50 USA only factory rebate GPS ColorTRAK thru 1/15/00!		
GPS Tracker 12 ch GPS w/wrist strap D	321.99	229.95
00-19044-000 Low profile external ant	95.95	
00-19060-000 Power/data cable	24.99	
00-19067-000 PC cable w/cig adapter	39.99	
Meridian XL GPS/plot/detach ant/case D	396.65	239.95

MAHA (MAH)

AA-FB 1.2v 1300ma AA NiMH batt cell w/tabs ea	$ 2.99	
AA-T 1.2v 1300ma AA size NiMH batt cell .ea	2.99	
AAA-T 1.2v 550ma AAA size NiMH batt cell ea	2.99	
MH-2A4 Slow charger for 4 max AA NiMH D	11.95	
MH-C124S Reg cgr; 1-4 AA/AAA NiMH/NiCD	9.95	
MH-C204F Quik cgr/condi; 2/4 AA/AAA NiMH/NiCD	24.95	
MH-BP-7 900ma 13.2v Icom nickel hydride	69.95	
MH-BP-8 1200ma 8.4v Icom nickel hydride	59.95	
MH-BP-8H 1800ma 8.4v Icom nickel hydride	69.95	
MH-BP-83 1200ma 7.2v Icom nickel hydride	49.95	
MH-BP-132B 1200ma 12v Ico blk nick hyd/mic	59.95	
MH-BP-132G 1200ma 12v Ico gray nick hyd/mic	59.95	
MH-BP-173 650ma 9.6v Icom nickel hydride	69.95	
MH-BP-180 1000ma 7.2v Icom nickel hydride	49.95	
MH-BP-196M 1350ma 9.6v Icom nick hydride	49.95	
MH-BP-199 700ma 6v Icom nick hydride/clip	55.95	
MH-BP-200 680ma 9.6v Icom nick hydride/clip	59.95	
MH-CNB-152 1000ma 12v Sta nickel hydride	59.95	
MH-CNB-153 1300ma 7.2v Sta nickel hydride	49.95	
MH-FNB-12 900ma 12v Yaesu nickel hydride	59.95	
MH-FNB-17 900ma 7.2v Yaesu nickel hydride	49.95	
MH-FNB-27 900ma 12v Yaesu nickel hydride	59.95	
MH-FNB-31 650ma 4.8v Yaesu nickel hydride	49.95	
MH-FNB-38 650ma 9.6v Yaesu nickel hydride	59.95	
MH-FNB-40H 650ma 7.2v Yae nick hyd/ spg clip	59.95	
MH-FNB-41 900ma 9.6v Yae nick hyd/spg clip	55.95	
MH-FNB-V47 1800ma 7.2v Yae nick hyd/spg clip	69.95	
V47 Belt Clip Spring loaded belt clip for Yae	9.95	
MH-PB-8 1300ma 12v Kenwood nickel hydride	62.95	
MH-PB-17 1300ma 12v Kenwood nickel hydride	59.95	
MH-PB-18 1300ma 7.2v Ken nick hyd; wall cgr only	49.95	

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MAHA - continued

		Reg	Sale
MH-PB-32	1000ma 6v Kenwood nickel hydride	47.95	
MH-PB-34	900ma 9.6v Kenwood nickel hydride	57.95	
MH-PB-39	1050 ma 9.6v Ken nickel hyd/clip	59.95	
MH-PB-39H	1800ma 6v Ken nickel hyd/clip	59.95	
MH-C777	Univ cgr/conditioner; nicad/nimh	49.95	
MHS-CW4	Clip-leads for external charging	3.99	
MH-C888	Univ drop-in rapid cgr/cond; nicad/nimh	59.95	
MHS-C801	Cup; ICW32A/TH22/79/FT10/50	7.95	
MHS-C802	Cup; IC02AT/TH78/FT470/530	7.95	
MHS-C803	Cup; Kenwood TH-D7A/G71A	7.95	
MHS-C804	Cup; Icom IC-T8A/T81A	7.95	
MHS-C805	Cup; Yaesu FT-11/41/51R	7.95	
MH-101-I1	Cgr;Ico157/160/174/131/2/Mah 132B/G D	69.95	39.95
MH-101-I3	Cgr;Ico 171/172/173/180/Mah BP173 D	69.95	49.95
MH-101-Y1	Cgr;Yae 10/11/12/17/25/27/Mah 12/27 D	69.95	49.95
MH-101-Y2	Cgr;Yae FNB31/38/Mah MHFNB38 D	69.95	49.95
MH-800K	500mw spkr/mic w/clip; Kenwood	19.95	
MH-800S	500mw spkr/mic/clip; Ali/Ico/Sta/Yae	19.95	
MH-800Y	500mw spkr/mic; Yae FT50/VX1R	24.95	
MH-A101	5/35w 2m FM amplifier	69.95	
MH-A102	5/35w 2m FM/SSB amp/preamp	89.95	
MH-A103	5/50w 2m FM/SSB amp/preamp	119.95	
MH-A104	5/100w 2m FM/SSB amp/preamp	229.95	
MH-A201	5/45w 2m//5/35w 440 FM amp	159.95	
MH-A301	5/50w 2m HT dock boost amp/pre	115.95	
MH-A302	5/45//5/35w 2m/440 HT dock boost	165.95	
MHS-I1	Ico 2G/02/2/32 adapter; A301/302	9.95	
MHS-I2	Ico 2SAT/W2 adapter; A301/302	9.95	
MHS-I3	Ico 2GXAT/W21AT adapt; A301/302	9.95	
MHS-I4	Ico W32/31/T7/22 adapt; A301/302	11.95	
MHS-I5	Ico T8A/T81A adapter; A301/302	11.95	
MHS-K1	Ken 25/26/75/77 adapt; A301/302	9.95	
MHS-K2	Ken TH22/79 adapter; A301/302	9.95	
MHS-K3	Ken G71A/D7A adapt; A301/302	11.95	
MHS-S1	ADI/Standard adapter; A301/302	9.95	
MHS-Y1	Yae 23/411E/470 adapt; A301/302	9.95	
MHS-Y2	Yae 26/415/530 adapt; A301/302	9.95	
MHS-Y3	Yae FT11/41/51 adapt; A301/302	11.95	
MHS-Y4	Yae FT10/40/50 adapt; A301/302	11.95	
MH-VOX-K	Deluxe VOX spkr/mic for Kenwood	39.95	
MH-VOX-S	Dlx VOX spkr/mic; Ali/Ico/Sta/Yae	39.95	

MALDOL (MAL)

ARD-5B	2m/440 0/3.8db 19.6" mobile ant ..Δ	$ 59.99	29.95
ARD-6	2m/440 2.6/4.9db 26.8" mobile .....Δ	70.99	39.95
ARD-12	2m/440 4.3/6.8db 48.8" mobile ....Δ	97.99	49.95
ARD-12B	Blk 2m/440 4.3/6.8db 48.8" mob Δ	97.99	59.95
ARS-50	6m 1/4 wave 61.2" mobile .....Δ	74.99	39.95
ARS-146	2m 4.1db 56" mobile ant .....Δ	77.99	49.95
ARS-440	440 5.5db 38.4" mobile ant .....Δ	67.99	29.95
ARS-440B	Black 5.5db 38.4" mobile .....Δ	67.99	29.95
EX-110	2m/440 3/5.5db 37.8" mob ant .....Δ	64.99	29.95
EX-111	2m/440 3.6/6db 44" mobile .....Δ	77.99	39.95
EX-111B	Blk 2m/440 3.6/6db 44" mobile ..Δ	77.99	49.95
FA-50	2m/440 2.15/3.2db 18.8" mag .....Δ	51.99	24.95
HS-702S	2m/440 0/3.2db 17.6" duck .....Δ	19.99	
VM-2HP	2m 43.2" 3db 300w mobile .....Δ	47.99	19.95
VM-727CR	2m/440 41.6" 3.8/6.2db .....Δ	67.99	29.95
VM-727HP	2m/440 36" 3/5.5db 300w .....Δ	53.99	24.95

MAXON (MAX)

27-KC	Docking handheld/AM Mobile CB .....D	$139.95	59.95
27-MCB	Compact handheld AM Mobile CB .D	129.95	49.95
FRS-114	FRS handheld .....Δ	99.95	49.95
WTA-9F	Ear speaker; FRS-114 .....Δ	6.95	1.95
GMRS-21X	1w 2ch GMRS/batt/cgr/AA holder	199.95	129.95
MX-49FX	5 ch 49 MHz ear mic Xcvr	89.95	49.95
MX-49HX	5 ch 49 MHz boom mic/headset Xcvr	89.95	49.95
MX-49SX	49 MHz boom mic/headset Xcvr	49.95	29.95
PC-50	5ch 49MHz hand-held/PTT/VOX headset	79.95	49.95
WX-70	Weather monitor/alert w/ps	49.95	39.95

MIDLAND (MID)

23-505	1.5-150MHz dual meter SWR/power	$ 24.95	

MIDLAND - continued

		Reg	Sale
74-109	Weather/hazard alert radio w/ps	59.95	39.95
74-200	SAME weather/hazard alert radio/ps	99.00	89.95
75-510XLB	Family radio handheld/batts/cgr	129.95	79.95
22-410	Speaker/mic for 75-510	34.95	
22-430	Throat mic/ear/PTT box; 75-510	69.95	

MIRAGE (MIR)

A-1015G	50-52 FM/SSB 10/150w amp/preamp	$389.00	349.95
B-34	2m FM 2/35w amplifier	69.95	
B-34G	2m FM/SSB 3.5/35w amp/preamp	89.95	
B-55G	2m FM 50w amp for handheld	118.95	109.95
B-215G	2m FM/SSB 2/150w amp/preamp	379.00	339.95
B-310G	2m FM/SSB 4/100w amp/preamp	199.00	179.95
B-320G	2m FM/SSB 50/200w amp/preamp	449.95	399.95
B-510G	Dlx 100w 2m FM amp for HT/mobile	229.95	209.95
B-1016G	2m FM/SSB 10/160w amp/preamp	379.00	339.95
B-1030G	2m FM/SSB 10/300w amp/preamp	689.00	619.95
B-2516G	2m FM/SSB 25/160w amp/preamp	299.00	269.95
B-2530G	2m FM/SSB 25/300w amp/preamp	689.00	619.95
B-5016G	2m FM/SSB 50/160w amp/preamp	299.00	269.95
B-5030G	2m FM/SSB 50/300w amp/preamp	669.00	599.95
BD-35	2m/440 4/45//4/35w HT amp	159.95	149.95
BD-38	2m/440 4/80//4/80w HT amp	299.95	279.95
B-24G	5/50w 2m HT dock boost amp/pre	114.95	
BD-25	5/45//5/35w 2m/440 HT dock boost	164.95	
MI-1	Ico 2G/02/2/32 adapter; B24G/BD25	9.95	
MI-2	Ico 2SAT/W2 adapter; B24G/BD25	9.95	
MI-3	Ico 2GXAT/W21AT adapt; B24G/BD25	9.95	
MI-4	Ico W32/31/T7/22 adapt; B24G/BD25	9.95	
MK-1	Ken 25/26/75/77 adapt; B24G/BD25	9.95	
MK-2	Ken 22/79 adapter; B24G/BD25	9.95	
MS-1	ADI/Standard adapter; B24G/BD25	9.95	
MY-1	Yae 23/411E/470 adapt; B24G/BD25	9.95	
MY-2	Yae 26/415/530 adapt; B24G/BD25	9.95	
MY-3	Yae FT11/41/51 adapt; B24G/BD25	9.95	
MY-4	Yae FT10/40/50 adapt; B24G/BD25	9.95	
C-22G	220 FM/SSB 2/20w amp/preamp	169.00	154.95
C-211G	220 FM/SSB 2/110w amp/pre	339.00	299.95
C-106G	220 FM/SSB 10/60w amp/preamp	239.00	214.95
C-1012G	220 FM/SSB 10/120w amp/preamp	339.00	299.95
C-1022G	220 FM/SSB 10/220w amp/preamp	655.00	589.95
C-2512G	220 FM/SSB 25/120w amp/preamp	315.00	289.95
C-2522G	220 FM/SSB 25/200w amp/preamp	655.00	589.95
C-5012G	220 FM/SSB 50/120w amp/pre	334.00	299.95
C-5022G	220 FM/SSB 50/200w amp/preamp	639.00	579.95
D-15N	430 FM/SSB/ATV 2/15w type N amp	189.00	169.95
D-26N	440 FM/SSB 2/60w type N amplifier	269.00	244.95
D-1010N	440 FM/SSB 10/100w type N amp	395.00	354.95
D-3010N	440 FM/SSB 30/100w type N amp	365.00	329.95
D-1010-ATVN	430 ATV 10/100w type N amp	414.00	369.95
RC-1*	Remote control head w/18' cable	45.95	

*Not for B-23/C-22/D-26

The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors

A-1015NR	6m FM 2/80w type N amplifier	$599.00	539.95
A-1015R	6m FM 2/80w SO-239 amplifier ...†	579.00	449.95
B-215NR	2m FM 1/110w type N amplifier	579.00	524.95
B-215R	2m FM 1/110w SO-239 amplifier	559.00	504.95
B-1016NR	2m FM 2/120w type N amplifier	619.00	559.95
B-1016R	2m FM 2/120w SO-239 amplifier	599.00	539.95
B-2516NR	2m FM 12/120w type N amplifier	569.00	519.95
B-2516R	2m FM 12/120w SO-239 amplifier	549.00	499.95
C-211NR	220 FM .5/80w type N amplifier	649.00	584.95
C-211R	220 FM .5/80w SO-239 amplifier	629.00	564.95
C-1012NR	220 FM 5/90w type N amplifier	649.00	584.95
C-1012R	220 FM 5/90w SO-239 amplifier	629.00	564.95
C-2512NR	220 FM 15/90w type N amplifier	615.00	559.95
C-2512R	220 FM 15/90w SO-239 amplifier	595.00	539.95
D-1010NR	440 FM 4/80w type N amplifier	654.00	589.95
D-3010NR	440 FM 12/80w type N amplifier	625.00	564.95
D-1010-ATVN-R	430 ATV 4/80w type N amp	654.00	589.95

MIRAGE - continued

		Reg	Sale
PREAMPS			
KP-1/10M	10m in shack preamp	$139.00	129.95
KP-1/6M	6m in shack preamp	139.00	129.95
KP-1/2M	2m in shack preamp	139.00	129.95
KP-1/220	220 in shack preamp	139.00	129.95
KP-1/440	440 in shack preamp	139.00	129.95
KP-2/10M	10m mast mount preamp	195.00	179.95
KP-2/6M	6m mast mount preamp	195.00	179.95
KP-2/2M	2m mast mount preamp	195.00	179.95
KP-2/220	220 mast mount preamp	195.00	179.95
KP-2/440	440 mast mount preamp	195.00	179.95
WATTMETERS			
MP-1	160-10m 25/200/2kw PEP wattmeter	$235.00	219.95
MP-2	6 & 2m 50/500/1.5kw PEP wattmeter	235.00	219.95
MP-3	420-450 5/50/500w PEP wattmeter	265.00	249.95

Monitor America (MON)

Monitor America	Scanner frequency book	$ 29.95

MOTOROLA (MOT)

50995	Camouflage TalkAbout Plus FRS .....Δ	$144.99	79.95
53543	Camouflage TalkAbout 250 FRS	144.99	89.95
53590	Blue TalkAbout 250 FRS	124.99	79.95
53592	Black TalkAbout 250 FRS	124.99	79.95
50226	Headset w/microphone	14.99	
53716	Black TA-280SLK NiMH FRS	189.99	119.95
53770	Dark slate FR50 FRS	74.99	49.95
53725	Headset w/microphone	14.99	
53544	2w grey TalkAbout Distance GMRS	259.99	189.95
53547	2w grey TalkAbout Distance Plus GMRS	279.99	199.95
50226	Headset w/microphone	14.99	

NCG (NCG)

BB-516	Motorcycle intercom set .....D	$ 89.95	49.95
BJP-514K	Motorcycle earphone/mic; Ken ....D	69.95	44.95
EN-921K	Spkr/mic earpiece; Kenwood .....D	44.95	19.95
MC-910	Ear/bm mic w/cap-clip/ear hook; not Ken D	49.95	29.95
MC-910K	Ear/bm mic w/cap-clip/ear hook; Ken HT D	49.95	29.95
MH-900PK	Earpc/boom mic/PTT; Ken HT ....D	39.95	14.95
MP-28	Boom mic/headset/PTT; all HT but Ken	39.95	
MP-28K	Boom mic/headset/PTT for Ken HT	39.95	
NCG-2050	1.6-60MHz 30/300/3kw meter	149.95	129.95
NCG-3000	118-530MHz 5/20/200w PEP meter	109.95	99.95
Power Pocket	12v 2AH lead acid belt batt/cgr	66.95	
RP-150	20A variable ps/lighted meters/fan	169.95	159.95
RP-300	30A variable ps/lighted meters/fan	259.00	239.95

NEW WAVE (NEW)

Adventurer	12' extended Portaple alum mast	$109.95
Traveler	19' extended Portaple alum mast	124.95
Rover	26' extended Portaple alum mast	149.95
Expeditioner	33' extended Portaple alum mast	174.95
Explorer	40' extended Portaple alum mast	199.95
Big Foot	Welded, unpainted park-on mt	119.95
Snap-on Mount	Clamp on mt; ant-mast	19.95

NORCOMM (NOR)

NC-101	Tunable CTCSS encoder	$ 19.95
NC-104	Programmable CTCSS encoder	24.95
NC-106	Prog CTCSS encoder/decoder	59.95
NC-401	Sub-miniature DTMF decoder	59.95

NYE VIKING (NYE)

ANTENNA TUNERS AND ACCESSORIES

MBV-A	3kw tuner with ant switch & meters	$879.95
020-001	2kw low-pass filter	56.95

MASTER KEY

330-001	Black enamel base w/cable, plug	$ 72.95
330-C	Chrome plated Master Key/cable/plug	139.95

HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS

320-001	No shorting switch	$ 44.95
320-003	As above, w/shorting switch	51.95
322-001	Brass hardware, no switch	35.95
322-003	As above, w/shorting switch	44.95

NYE - continued

	Reg	Sale
STANDARD SPEED-X KEYS		
310-001 Black, no shorting switch	$ 40.95	
310-003 As above, w/shorting switch	45.95	
312-001 Brass arm, no shorting switch	32.95	
312-003 As above, w/shorting switch	39.95	

Oak Bay Technologies (OAK)

	Reg	Sale
BS-25 Automatic car battery saver module D	$ 39.95	29.95
CA-232HH Handheld packet cable D	34.95	9.95
CA-232U Universal packet cable D	34.95	9.95
LP-11P 1.8-30 MHz 1kw low-pass filter D	69.95	
LP-50 1.8-54 MHz 1kw low-pass filter D	69.95	
PS-612M Hvy duty DC pwr strip w/breakers D	64.95	59.95

Optoelectronics (OPT)

	Reg	Sale
Clipmate Windshield mt; Scout/400 Δ	$ 25.00	2.95
Spectrum FCC data CDROM/Scout prog Δ	29.00	2.95
SSB-220A SSB/gen purpose 3GHz bench ctr Δ	329.00	169.95
CB-232 PC interface cable Δ	39.00	6.95
Optolog Software; 8040/SSB-220A Δ	25.00	2.95

Oregon Scientific (ORE)

	Reg	Sale
BA-812E The weather clock	$ 69.95	49.95
JM-818WFA Widescreen Exactset weather clock	99.95	89.95
PE-319 Pedometer with personal security	29.99	
RM-116E Exactset radio controlled clock	69.95	39.95
WM-918 Dlx weather station w/rain gauge	299.95	199.95
SW-918 PC software/cable for WM-918	29.95	
WMR-918 Dlx wireless WX stn w/rain gauge	499.95	329.95
WR-102 Port WX/hazard radio/SAME alert	69.95	
WR-3300 Weather/hazard radio/alert w/ps	49.95	39.95
WR-8800 Port WX/hazard radio/alert w/ps	79.95	59.95

OUTBACKER (OUT)

	Reg	Sale
OB-8 300w PEP 6' 75-10m 8-band mobile ant	$279.95	
OB-8HP 500w PEP 6' 75-10m 8-band mob ant	299.95	
OB-S8 8-band 300w PEP split ant/storage bag	299.95	
OB-8TRI 3-pc 300w PEP 6' 8-band port ant	329.95	
OB-M 300w PEP 6' 75/40/20/17/10m/HF marine	429.95	
Perth 150w PEP 7.5' 75-10m mobile ant	289.95	
Perth Plus 150w PEP 6' 75-10m+6m/2m mob ant	299.95	
Stealth Plus 100w PEP 4' 75-10m+6/2m ant	269.95	
Outreach 300w PEP 12' 160-10m antenna	399.95	
Outreach 500 600w PEP 12' 80-6m antenna	439.95	
Outrunner 150w PEP 9' 160-10m antenna	349.95	
ALP Outpost Base tripod mtg sys for mob ant	199.95	
OB-SB ⅜-24 spring and ½" hole base	99.95	
Diamond **K-400-3/8C** ⅜-24 trunk mt, 6' coax	69.95	
Diamond **C-110** 10' ext cable; K-400-3/8C	14.95	

PACCOMM (PAC)

	Reg	Sale
APRS port **switch**	$ 29.95	
BayMod-25 Modem D	45.95	19.95
HandiPacket Small TNC for handhelds	229.95	
PicoPacket TNC, **128K** RAM	149.95	
PicoPacket battery model TNC, **128K** RAM	209.95	
PicoPacket dual serial port TNC, **128K** RAM	199.95	
Spirit-2 Standard high performance controller	239.95	
Tiny-2 Mk-2 Multi-purpose TNC	149.95	
Tiny-2 Mk-2/GPS TNC w/GPS & mag GPS ant	499.95	

Palomar Engineers (PAL)

	Reg	Sale
5-15 MHz plug-in loop (HF-1) Δ	$ 99.95	89.95
1.6-5 MHz plug-in loop (160m, 80m) Δ	99.95	89.95
.55-1.6 MHz plug-in loop (AM broadcast) Δ	99.95	89.95
150-550 KHz plug-in loop (LF, 1750m) Δ	99.95	89.95
40-150 KHz plug-in loop (WWVB, Loran) Δ	99.95	79.95
FER-2 RF ferrite toroid kit	25.95	
MDB-2 Mag dipole receiving balun D	39.95	14.95
MSB-3 Magnetic switch receive balun D	135.00	59.95
P-508 .2-30MHz 12v active Rcvr preamp D	99.95	79.95
PCM-1 1-30MHz RF current meter	135.00	129.95
PS-95 AC adapter for M-835/840 D	15.95	
PT-340 Tuner-Tuner (use with ant tuner)	99.95	
RFI-3 RF interference kit D	20.95	14.95

PALOMAR ENG - continued

	Reg	Sale
RFI-4 RF interference kit	25.95	
SMB-5 SmartBridge prog; AT computers D	29.95	4.95
VLF-A VLF converter; 10-500 KHz to 80m	89.95	
VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz	89.95	

PAR (PAR)

	Reg	Sale
50-EL3 6m 3 el beam, 5' boom, 7db	$ 91.95	
144-AUX 2m 4 effective el add-on kit, 7 db	42.95	
OA-28 10m horizontal omni antenna	74.95	
OA-50 6m horizontal omni antenna	63.95	
SK-50 Stacking harness for OA-50	36.95	
OA-144 2m horizontal omni antenna	54.95	
SK-144 Stacking harness for OA-144	34.95	
OA-222 220 horizontal omni antenna	54.95	
SK-222 Stacking harness for OA-222	34.95	
OA-432 430 horizontal omni antenna	54.95	
SK-432 Type N stacking harness; OA-432	54.95	
UHFDN450 440 dual band notch filter	62.95	
VHFDN152 2m dual band notch filter	62.95	
VHFDN152HT 2m dual band HT notch filter	68.95	
VHFTN152-158 2m dual band+pager notch filt	82.95	
UHF-12 12" RG58/silver/gold/tef PL259s	9.95	

PATCOMM (PAT)

	Reg	Sale
PC-16000 HF Xcv/dig modem/keyboard D	1649.00	999.95

PENETROX (PEN)

	Reg	Sale
Penetrox A 4 oz tube for antennas	$ 12.95	

PERCON (PEC)

	Reg	Sale
Spectrum FCC database CDROM Δ	$ 29.95	9.95

PERIPHEX (PER)

	Reg	Sale
BP-132 12v 600ma battery for Icom Δ	$ 51.80	19.95
BP-132A 12v 600ma batt for Icom Δ	51.80	19.95
FNB-33 4.8v 1700ma batt for Yaesu Δ	37.50	19.95
FNB-35 7.2v 600ma batt for Yaesu Δ	46.80	9.95
FNB-38 9.6v 650ma batt for Yaesu Δ	64.30	29.95
PB-7S 7.2v 1700ma batt for Ken Δ	59.95	29.95
Santec ST-142 9.6v 600ma batt; ST142 D	24.95	4.95

PHILIPS (PHI)

	Reg	Sale
U-105 Light duty rotor/4-wire	$ 69.95	
TB-105 Thrust bearing	18.95	

PIPO TOUCH-TONE PADS (PIP)

	Reg	Sale
PK-1 12-digit pad	$ 71.95	
PK-1K 12-digit pad w/delay relay	78.95	
PK-1M 12-digit pad for surface mtg	71.95	
PK-2 16-digit pad	76.95	
PK-2K 16-digit pad w/delay relay	83.95	
PK-2M 16-digit pad for surface mtg	76.95	

POLICE CALL (POL)

	Reg	Sale
CD-ROM 48 state scanner freqs CD-ROM	$ 34.99	
IL/IN/KY/WI Police Call Plus scanner freq book	12.99	
MI/OH Police Call Plus scanner freq book	12.99	

POLYPHASER (PLY)

	Reg	Sale
LIGHTNING PROTECTION		
IS-50NX-C2 125-1000 375/125/50w N flange	$ 61.95	
IS-50UX-C0 1.5-400 2kw/375/125w flange mt	61.95	
IS-50UX-C1 50-700MHz 375/125w flange mt	61.95	
IS-B50LN-C2 125-1000 375/125/50w N bulkhead	64.95	
IS-B50LU-C0 1.5-400 2kw/375/125w bulkhead	64.95	
IS-B50LU-C1 50-700 375/125w bulkhead mt	64.95	
IS-IE50LU-C0 1.5-400 dlx 2kw/375/125w bulk	129.95	
IS-IE50LU-C1 50-500 dlx 375/125w bulkhead	129.95	
IS-IE50LN-C1 50-700 dlx 375/125w N bulkhead	117.95	
BF Adapter Bulkhead to flange mt adapter	9.95	
FB Adapter Flange to bulkhead mt adapter	11.95	
IS-PLDO-120-15A 120v 15A power protector	172.95	
IS-PLDO-120-20A 120v 20A power protector	215.95	
IS-RCT 8-wire rotor control protector	54.95	
J-1 ½" to 1⅓" bronze transition clamp	8.95	
J-2 1½" to 2¼" bronze transition clamp	12.95	
IS-SPTL Single phone line protector	57.95	

POLYPHASER - continued

	Reg	Sale
CS112-25 25' 1½" copper strap	25.95	
CS112-50 50' 1½" copper strap	51.95	
CS112-75 75' 1½" copper strap	75.95	
CS112-100 100' 1½" copper strap	100.95	
CS3-25 25' 3" copper strap	51.95	
CS3-50 50' 3" copper strap	100.95	
CS3-75 75' 3" copper strap	150.95	
CS3-100 100' 3" copper strap	197.95	
CS6-25 25' 6" copper strap	100.95	
CS6-50 50' 6" copper strap	197.95	
CS6-75 75' 6" copper strap	299.95	
CS6-100 100' 6" copper strap	391.95	
CU-SPGP Copper single point ground panel	69.95	
TK-2 1½" strap to Rohn twr corrosion free clamp	5.95	
TK-3 1½" strap-2¼" to 3¾" mast corr free clamp	8.95	
1C-112S #6-#1 wire to 1½" strap clamp bond	10.95	
58R-112S 1½" strap to ⅝" gnd rod clamp bond	12.95	
MSC-3 Junc; 2+ 1½" or 3" strap clamp bond	10.95	
UNI-KIT 2CT Gnd kit; coax to alum/tin/galv	29.95	
UNI-KIT 2TC Gnd kit; galv twr leg to copper	32.95	
UNI-KIT 2CC Ground kit; coax to copper	28.95	
CCK Copper cleaning kit; 4 oz can, brush	27.95	
GLEP Lightning and EMP Protection book	22.95	

The POUCH (POU)

	Reg	Sale
1R Pouch for Yaesu VX-1R	$ 12.95	
2G Pouch for Icom IC-2GXAT	14.95	
5R Pouch for Yaesu VX-5R	14.95	
10R/10R/50R Pouch; Yaesu FT-10/40/50R	12.95	
32-5T Pouch; Alinco DJ-G5T/Icom IC-W32A	14.95	
95T Pouch for Alinco DJ-195T	14.95	
508/S508-Q7 Pouch; Ico Q7/Sta C108/508A	12.95	
510/S-510-T8 Pouch; Ico T8A/T81A/Sta 510A	12.95	
AF-738 Pouch for Alinco DJ-C1T/C4T/C5T	12.95	
ANALYPOUCH Pouch for MFJ analyzer	24.95	
DTX Pouch for Kenwood TH-D7A	17.95	
G-71/G Pouch for Kenwood TH-G71A	17.95	
P-4V Pouch for UBZ-LF14 FRS	12.95	
P-5 Pouch; DJS11T/S46/ICT7A/T22A/FT11R	14.95	
PR Pouch for ADI PR-52/222	14.95	
S-1 Pouch; AT-201HP/AT-600HP/TH-79A	17.95	
S-2 Pouch; TH-79AH/TH-235A/VC-H1	17.95	
S-3 Short 3 Pouch for HT	17.95	
Slim Pouch; Alinco DJ-190/191T/Sta C-288A	17.95	
SS Pouch for TH22AT/TH28A/FT51R&HP	17.95	
T-2A Pouch; AT-201/600/Chr AH-50/IC-T2A	17.95	
V-5T Pouch for Alinco DJ-V5T	14.95	
VX-3T Pouch for Alinco DJ-180/280/480T	17.95	
XF-1 Pouch for Yaesu VXF-1/VXF-10 FRS	12.95	
Chest B/S Chestpouch ser B w/S pocket	29.95	

PREMIER (PRE)

	Reg	Sale
AL-800 2m/440 34" BNC rubber duck ant	$ 34.95	
RD-8 2m/440 6.5" BNC duck	17.95	
RD-9 2m/440/900 7" BNC duck	18.95	
RD-9SMA 2m/440/900 7" SMA duck	21.95	
RD-78 2m/440 15" BNC whip	22.95	
RD-98 2m/440 17" BNC whip	24.95	
RD-98SMA 2m/440 17" SMA whip	27.95	
MC-2 Super suction & mag mt; NMO/UHF	37.95	
SB-752 12vdc 6.5A port batt power pack	59.95	
TA-2 Hvy dty rubber coat tnk mt; NMO/UHF D	34.95	19.95
TX-3 2m/440/900-1.2 800/800/200w triplexer D	54.95	14.95
SPM-100 Spkr/mic; ADI/Ali/Icom/Yaesu	27.95	24.95
SPM-100L Spkr/mic/L plug; Icom/Yaesu	27.95	24.95
SPM-101 Speaker/mic for Kenwood	29.95	24.95
SPM-102 Speaker/mic; Yae FT-50/VX1/5R	33.95	24.95
SPM-200 Lapel mic/earph; ADI/Ali/Ico/Yae	18.95	
SPM-200L Lapel mic/earph/L; Icom/Yaesu	18.95	
SPM-200E Lapel mic/earhook; ADI/Ali//Ico/Yae	21.95	
SPM-200EL Lapel mic/earhook/L; Ico/Yae	21.95	
SPM-201 Lapel mic/earphone for Kenwood	19.95	
SPM-201E Lapel mic/earhook for Kenwood	23.95	
SPM-202 Lapel/mic/earphone; FT-50/VX1/5R	20.95	

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

PREMIER - continued

	Reg	Sale
SPM-202E Lapel mic/earhook; FT-50/VX1/5R	24.95	
SPM-300 Spkr/mic/lock/vol; ADI/Ico/Yae .....D	34.95	
SPM-301 Spkr/mic/PTT lock/volume; Ken ...D	39.95	24.95
SPM-400 Boom/mic; ADI/Alinco/Icom/Yaesu .	25.95	
SPM-400L Boom/mic/L; Icom/Yaesu	25.95	
SPM-401 Boom/mic for Kenwood	27.95	
SPM-402 Boom/mic; Yaesu FT-50R/VX1R/5R	29.95	
PTT-1 Remote PTT control; SPM-400 series	9.95	
SPM-400PT Boom/mic/PTT-1; ADI/Ali/Ico/Yae	29.95	
SPM-400LPT Boom/mic/L/PTT-1;Icom/Yaesu	29.95	
SPM-401PT Boom/mic/PTT-1 for Kenwood	30.95	
SPM-402PT Bm/mic/PTT-1; Yae FT50R/VX1/5R	32.95	
SPM-500 Throat/mic/earph; ADI/Ali/Ico/Yae ..	37.95	
SPM-501 Throat/mic/earphone for Kenwood ..	39.95	
SPM-502 Throat/mic/earphone; Yae FT-50/VX1/5R	40.95	
SPM-600 Full sized spkr/mic; ADI/Ali/Ico/Yae	31.95	
SPM-600L Full sized spkr/mic/L; Icom/Yaesu	31.95	
SPM-601 Full sized spkr/mic for Kenwood	31.95	
SPM-602 Full sized spkr/mic; FT50/VX1/5R	31.95	
SPM-700 Palm mic w/earph; ADI/Ali/Ico/Yae	29.95	
SPM-701 Palm mic w/earphone for Kenwood	29.95	
SPM-702 Palm mic w/earphone; FT50/VX1/5R	31.95	
EH-1 Deluxe earphone w/earhook	15.95	
EH-1K Deluxe earphone w/earhook; Kenwood	15.95	
MMC-100 Sun visor mobile mic system	79.95	
PMC-100 Base station microphone system ..	79.95	
PCA-IHF Cable/8-pin; ADI/Icom	14.95	
PCA-IVHF Cable/RJ-45; ADI/Icom	14.95	
PCA-KHF Cable/8-pin; Alinco/Kenwood	14.95	
PCA-KVHF Cable/RJ-45; Alinco/Kenwood ..	14.95	
PCA-YHF Cable/8-pin; Yaesu	14.95	
PCA-YVHF Cable/RJ-45; Yaesu	14.95	

PRO AM by VALOR (VAL)

VHF/UHF ANTENNAS ONLY (No Mounts)

MO144-440 2m/440 antenna	$ 21.95	
PAQA 136-515 MHz ¼ wave antenna	8.95	
PAQ-144 2m ¼ wave antenna	8.95	
PAQ-435 440 ¼ wave antenna	8.95	
PAQ-3820 2m ¼ wave whip w/ ⅜-24 thread .	8.95	
PHB-144 2m ⅝ wave 3 db antenna	31.95	
PUB-440 440 5 db antenna .....Δ	39.80	6.95

MOUNTS ONLY FOR ABOVE ANTENNAS

PAM Low profile magnet mount w/coax	$ 28.95	
PAMB Black low profile mag mount w/coax ..	28.95	
PAN38 ⅜-24 antenna to NMO mt adapter	19.95	
PAS ¾" surface mount w/coax	20.95	
PASMO ¾" surface mt only (no coax)	7.95	
PAS38 ⅜" surface mount w/coax	20.95	
PAS38MO ⅜" surface mt only (no coax)	7.95	
PAT-2 No hole trunk mount w/coax	27.95	
PAT-2B Black no hole trunk mount w/coax	27.95	
PAT-3 Swivel NMO-style trunk mt w/coax	35.95	

OTHER VHF/UHF ANTENNAS & MOUNTS

77BNC 2m/440 12" 0/2.1db BNC rubber duck	$ 23.95	
144BNC 2m 12" ¼ wave rubber duck w/BNC	11.95	
220BNC 220 10" ¼ wave rubber duck w/BNC	11.95	
450BNC 440 6½" ¼ wv rubber duck w/BNC ...	11.95	
BNC-SC Suction cup extension; rubber ducks	22.95	
WMSL-BNC Window clip for rubber ducks ..	42.95	
82BNC Magnet mt for BNC w/coax .....D	27.95	10.95
100ADN SO-239 horizontal mirror mt	10.95	
101ADN HD alum mirror mt w/SO-239	10.95	
105AD Hvy duty ⅜" mount assembly	6.95	
301 ⅜-24 magnet mt only w/coax	25.95	
401 Low profile ⅜-24 mag mt only w/coax	31.95	
DAK Mt for 2 vert ants or horizontal dipole ...	13.95	
GM-100AD SS GM ⅜-24 mirror mt w/SO-239	9.95	
GM-144 2m 2.5db on glass antenna	44.95	
GM-270 2m/440 2.6/6.3db on glass antenna	59.95	
TGMKD On glass replacement mtg kit	8.95	
MM-3401 Maxi-mag mt ⅜-24 kit (3-5" mags)	59.95	
MM-3401B Blk maxi-mag mt ⅜-24 kit (3-5" mags)	59.95	

PRO AM - continued

	Reg	Sale
SS-100MOT 3-way NMO mirror mt w/coax	23.95	
CX-144/CX-144B 2m ⅝ wave 3db ⅜-24 whip	17.95	
MM-270B 2m/440 mini mag mt ant w/BNC .	56.95	
PA-144M 6m/2m 49" 0/3db mag mt ant	19.95	
PA-220M 220 30" 3db mag mt ant	19.95	
PA-270M 2m/440 19" 0/2.1db mag mt ant ..	19.95	
PA-440M 440 22" 4db mag mt ant	19.95	
PAQM 144-450 MHz ¼ wave BNC mag ant ...	28.95	
PM-144-440BN 2m/440 BNC mag mt ant	33.95	
TGS 30-1200MHz on-glass scanner ant	48.95	
VAA-002B 144-450 black ¼ wv mag mt ant .	23.95	
VAA-002BBN 144-450 black ¼ wv BNC mag ant	27.95	
120 Sawtooth hump mt for mobile radios	7.95	
D-270 2m/440 100w duplexer	45.95	

MOBILE HF ANTENNAS (No Mounts)

AB-5 75/40/20/15/10m antenna	$119.95	
PHF-160 160m 8' ⅜-24 whip	97.95	
PHF-75 75m 8' ⅜-24 whip (4' coil, 4' whip) .	29.95	
PHF-40 40m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-30 30m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-20 20m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-17 17m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-15 15m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-12 12m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-10 10m 8' ⅜-24 whip (4' coil, 4' whip) .	23.95	
PHF-6 6m 58" ⅜-24 whip	23.95	
103S Quick disconnect/5 twist lock connectors	24.95	

QSL Card Holders (ART)

QSL Card Holders, pack of 3, 20 cards/holder	$ 12.95

RF APPLICATIONS (RFA)

P-1500 1.8-30 MHz digital power/SWR meter	$199.95	
P-1500-P Power supply for P-1500	16.95	
P-2000A 1.8-30 MHz dig power/SWR meter ..	299.95	
P-2000CW 1.8-30 MHz audible (CW) meter ..	249.95	
P-3000 Deluxe 1.8-30MHz digital power/SWR	299.95	
P-3000-P Power supply for P-3000, etc. ..	12.95	
VFD-HF 1.8-30 MHz 2955w dig power/SWR ..	249.95	
VFD-VHF 50-225 Mhz 300w dig power/SWR .	249.95	
Match Alert VSWR monitor/alarm	129.95	

RF CONCEPTS (RFC)

144 2m FM mini-amp 2/30w amp .....D	$119.95	59.95
144P 2m FM mini-amp 2/30w amp/preamp Δ	139.95	99.95
VHF1-60 2m 1/60w FM HT amplifier .....D	249.95	129.95
2-23 2m FM/SSB 2/30w amp/preamp .....D	149.95	69.95
2/70 2m/440 FM 3/30//5/20w HT amp .....D	259.95	149.95
UHF-50 440 3/50w FM HT type N amp .....D	299.95	169.95

RF INQUIRY (RFI)

CF250E-UHF 250w 1.8-70 common mode filter	$ 89.95
CF5KV-UHF 5kw 1.8-70 common mode filter	124.95

RF LIMITED (RFL)

HL-35NP 2m .5-5/20-35w amplifier .....Δ	$ 89.95	29.95
HL-35V 2m .5-5/20-35w amp/preamp .....Δ	119.95	59.95
HL-36U 440 .5-12/30w amplifier .....Δ	259.95	129.95

RF PARTS (See Diamond)

RF PRODUCTS (RFP)

199-416 BNC mag mt, 10' coax w/BNC	$ 17.95

RMS (RMS)

PA-546 2m 5/45w amplifier .....Δ	$129.99	39.95
W-450 140-170/430-470 150w meter ..... Δ	69.99	29.95

RACOM (RCO)

700 Automatic morse code identifier .....Δ	$ 92.95	59.95
700-PC Programming kit .....Δ	30.95	14.95

Radio Amateur Callbook (RAC)

059324 2000 World Radio TV Handbook	$ 24.95
087581 2000 N America/Int CD-ROM callbook ...	49.95

CALLBOOK - continued

RADIO PUBLICATIONS

087034 All About Cubical Quad Antennas	$ 13.95
087042 Beam Antenna Handbook	13.95
087050 All About VHF Amateur Radio	13.95
087069 Radio Amateur Antenna Handbook ..	13.95
087077 Simple, Low Cost Wire Antennas	13.95
087093 Interference Handbook	13.95
087107 All About Vertical Antennas	13.95

RAMSEY (RAM)

AA-7 Active antenna kit	$ 28.95
AF-1 Hi-Q CW audio filter kit	34.95
AR-1 Aircraft receiver kit	29.95
CS-1 Crystal radio set kit	19.95
CW-7 CMOS keyer kit	24.95
DF-1 Foxhound direction finder kit	59.95
DN-1 Nicad conditioner/fast charger kit	49.95
FM-1 300' FM broadcast transmitter kit	5.95
FM-4 Hi power FM broadcast transmitter kit	14.95
FR-1 FM broadcast receiver kit	24.95
HR-20 20m receiver kit	29.95
HR-40 40m receiver kit	29.95
HR-80 80m receiver kit	29.95
PR-10 2m preamp kit	17.95
QRP-20 20m CW transmitter kit	29.95
QRP-40 40m CW transmitter kit	29.95
QRP-80 80m CW transmitter kit	29.95
RFS-1 RF sensed switch kit	14.95
SCA-1 SCA decoder kit	27.95
SR-1 Shortwave receiver kit	29.95
TS-1 CW touch paddle switch kit	6.95
UT-5 Universal timer kit	8.95
VS-1 Voice activated switch kit	6.95
WA-10 BNC telescopic whip antenna	12.95

RANGER (RAN)

LC-1000 Leather case; RCI-1000 VHF HT ...Δ	$ 24.95	4.95
SRA-106A Speaker/mic; RCI-1000 VHF HT ..D	44.95	14.95
SRA-107 Speaker/mic; RCI-1000 VHF HT ...Δ	44.95	24.95

ROHN TOWERS (ROH)

HBX-40/BXB-6 40' twr/base stubs, 10 sq ft *T	$544.50	490.95
HBX-48/BXB-7 48' twr/base stubs, 10 sq ft *T	726.60	653.95
HBX-56/BXB-8 56' twr/base stubs, 10 sq ft *T	911.30	820.95
HDBX-40/BXB-7 40' twr/base stubs, 18 sq ft ΔT	680.60	499.95
HDBX-48/BXB-8 48' twr/base stubs, 18 sq ft *T	907.30	816.95

*Drop-shipped from factory

On factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft.

Other Rohn Towers available on Special Order

SGC (SGC)

04-01 SG-2000 150w 1.8-30 MHz 12v Xcvr	1895.00	1599.95
04-06 SG-2000 Slim Pack Xcvr (no head) ...	1595.00	1339.95
04-11 Std SG-2000 rem head/bkt/20' cable	695.00	589.95
04-15 Remote mobile head/mem ch's only	495.00	399.95
51-82 Fan kit for continuous duty xmit	300.00	269.95
04-10 SG-2000 Xcvr w/DSP/PowerTalk head ..	2195.00	1849.95
04-23 SG-2000 Xcvr/DSP/PowerTalk remoted	2595.00	2179.95
04-12 Remote kit w/swivel bkt & cable	200.00	179.95
04-13 Remote kit w/5-way mount & cable	350.00	319.95
04-14 Rem kit w/suction cup mt & cable	495.00	449.95
04-22 PowerTalk remote head	1095.00	799.95
52-31 Waterproof military handset	375.00	339.95
52-32 Carbon telephone handset	190.00	174.95

SGC - continued

	Reg	Sale
52-34 RS-232 interface; SG-2000 Xcvr	195.00	179.95
52-47 Shock/military mounting tray	300.00	269.95
52-51 CA-1 High voltage feed wire .per ft.	79¢	
52-52 CA-2 RG-58 coax cable .per ft.	99¢	
52-53 CA-230 Ant coupler cable .per ft.	4.95	
52-54 CA-2000 Remote head cable per ft.	4.95	
53-04 PS-30 30A/40A peak unreg ps	425.00	399.95
53-05 PS-50 50A/70A peak unreg ps	459.50	419.95
52-61 PSC/12-1 12' ps cable, 1 plug	50.95	
52-62 PSC/12-2 12' ps cable, 2 plugs	60.95	
05-01 SG-2020 Mini 20w PEP QRP Xcvr/mic	*675.95	
*$50 factory rebate from SGC thru 1/15/00; 05-01		
*$100 factory rebate from SGC thru 1/15/00; 05-01+54-18		
52-96 SG-500 1.8-24MHz 12v 500w PEP amp	1395.00	1169.95
51-82 Fan kit for continuous duty xmit	300.00	269.95
56-40 SG-7200 DSP HF Smartmodem/Emailer	695.95	
70-07 PowerClear add-on DSP unit	395.00	359.95
54-12 SG-230 200w 1.8-30 MHz 12v Smartuner	595.00	489.95
54-61 25' extension cable	60.95	
54-62 50' extension cable	90.95	
54-63 SmartLock; tuners made after 9/1/93	59.95	
54-15 SG-235 500w 1.8-30MHz 12v Smartuner	1595.00	1169.95
54-16 SmartPro 200w 1.6-30MHz 12v tuner †	995.00	599.95
54-17 SG-231 HF+6m 12v Smartuner	595.00	529.95
54-18 SG-237 100w PEP HF+6m mini Smartuner	*295.95	
*$25 factory rebate from SGC thru 1/15/00; 54-18		
*$100 factory rebate from SGC thru 1/15/00; 54-18+05-01		
55-04 SG-103 1.8-30MHz 150w dipole	249.50	229.95
55-06 SG-104 2-28 MHz 90' 1kw dipole	700.00	629.95
55-27 SG-303 1.8-30 9' mobile whip & mt	495.00	449.95
55-67 Replacement whip for SG-303	225.00	199.95
55-28 SG-307 1.8-60 7' mobile whip & mt	345.00	319.95
55-47 QMS-2 Quick mt sys w/SG-230/303 whip	1580.00	895.95
55-48 QMS-3 500w antenna system	2580.00	2169.95
55-49 QMS-7 Quick mt sys w/SG-231/307 whip	1430.00	1299.95
56-15 External ARQ/FEC system	1200.00	1069.95

SANGEAN (SAN)

ATS-303 AM/FM/shortwave portable receiver	$119.00	89.95
ATS-404 AM/FM/SW portable receiver w/case	139.95	99.95
ATS-606A AM/FM/shortwave portable receiver	249.00	169.95
ATS-818 AM/FM/shortwave portable receiver	299.00	179.95
ATS-818CS AM/FM/SW port Rcvr w/cassette	359.00	229.95
ATS-909 AM/FM/shortwave portable receiver	389.00	279.95
DT-200V AM/FM/VHF TV sound dig port Rcvr	79.95	
SR-77 AM/FM micro sized receiver	34.95	

SEQUOIA (SEQ)

POCKET PC REF Pocket PC reference book	$ 14.95
POCKET REF Pocket reference book	9.95

SHAKESPEARE (SHA)

4008-4 4' extension w/1.5" chr fittings Δ	$ 93.50	19.95
5204-8 Combo CB/VHF marine 8' ant Δ	192.50	39.95
5220 8' Galaxy Loran C whip Δ	38.95	9.95
5221 8' black Galaxy Loran C whip Δ	38.95	9.95
5228 8' Galaxy ext mast/1.5" chr fittings Δ	143.50	39.95
5302 8' VHF marine/Loran combo ant Δ	169.95	49.95
396-1 3 db, 5' VHF marine ant, less mount	107.50	59.95
5101 6 db, 8' VHF marine ant, less mount	79.95	49.95
5202 6db VHF mar ant/chrome ferrule, less mt	133.95	69.95
5206-C Econo 8' VHF mar ant/chrome ferrule, no mt	56.95	39.95
495 White plastic lift & lay mount	23.50	16.95
4187 Stainless steel ratchet mount	46.95	36.95
420 3db, 5' VHF marine ant w/fold-down mt	98.50	59.95

SHURE (SHU)

526T Series II Dynamic amplified desk mic	$154.80	119.95
R96 Replacement cartridge	26.95	

SMILEY ANTENNA (SMI)

270A 2m/440 gain telescopic whip	$ 19.95
270A/SMA 2m/440 gain tele whip w/SMA	19.95
5/8 SLD-2 2m ⅝ Slim Duck rubber ant	17.95
5/8 SLD-220 220 ⅝ Slim Duck rubber ant	17.95

SMILEY - continued

	Reg	Sale
5/8 SLD-440 440 ⅝ Slim Duck rubber ant	17.95	
5/8 SLD-2 Combo 2m ⅝ duck & stubby ant	24.95	
5/8 SLD-220 Combo 220 ⅝ duck & stubby ant	24.95	
5/8 SLD-440 Combo 440 ⅝ duck & stubby ant	24.95	
FLX 1/2 WAV-2M ½ wv 2m BNC whip/flex coil	25.95	
RD-2 2m rubber duck antenna	14.95	
RD-220 220 rubber duck antenna	14.95	
RDMD-2 2m mini rubber duck antenna	14.95	
RDMD-220 220 mini rubber duck antenna	14.95	
RDMD-440 440 mini rubber duck antenna	14.95	
RDS-2 2m stubby rubber duck antenna	14.95	
RDS-220 220 stubby rubber duck antenna	14.95	
RDS-440 440 stubby rubber duck antenna	14.95	
SD-2 2m Slim Duck thin rubber antenna	14.95	
SD-220 220 Slim Duck thin rubber antenna	14.95	
SL-440 440 slimline type duck	12.95	
SS-II Super Stick 2m ⅝ wv telescopic ant	19.95	
SS-III Super Stick 220 ⅝ wv telescopic ant	19.95	
SS-IV Super Stick 440 ⅝ wv telescopic ant	19.95	
SS-II/Combo 2m ⅝ wv telescopic & stubby ant	26.95	
SS-III/Combo 220 ⅝ wv telescopic & stubby ant	26.95	
SS-IV/Combo 440 ⅝ wv telescopic & stubby ant	26.95	
TAQ-2 2m ¼ wave stainless whip	10.95	
TAQ-220 220 ¼ wave stainless whip	10.95	
TAQ-440 440 ¼ wave stainless whip	10.95	
TS Thin Stick 2m/220 ⅜ wave telescopic whip	16.95	

SOLARCON (SOL)

A-99 10m/CB fiberglass base station ant	$ 74.95	64.95
GPK-1 Ground plane radial kit	39.95	

SOLDER-IT (SLD)

ALP-21D Alum solder paste, 7.1gm Δ	$ 6.00	69¢

SONY (SON)

RFU-W100 RF adaptor for WebTV Δ	$ 49.95	4.95

SHORTWAVE/SCANNERS

ICF-2010 AM/FM/SW/LW/air port Rcvr w/ps	$449.95	359.95
ICF-SW07 AM/FM/SW micro Rcvr w/ps	529.95	399.95
ICF-SW10 AM/FM/SW compact receiver D	59.95	49.95
ICF-SW11 AM/FM/SW compact receiver	59.95	49.95
ICF-SW12 AM/FM/SW travel Rcvr/world clock D	129.95	99.95
ICF-SW30 AM/FM/SW portable receiver	129.95	99.95
ICF-SW40 AM/FM/SW port receiver	149.95	129.95
ICF-SW100S AM/FM/SW portable receiver	479.95	349.95
ICF-SW1000T AM/FM/SW port Rcvr w/cassette	599.95	499.95
ICF-SW1000TS AM/FM/SW Rcvr/tape/AN-LP1 D	649.95	549.95
ICF-SW7600G AM/FM/SW portable receiver	199.95	179.95
ICF-SW7600GS AM/FM/SW port Rcvr/ANLP1 D	279.95	249.95
AC-E60HG 6vdc 400ma AC adapter	22.99	
AN-1 LW/MW/SW outdoor active rcv ant	119.95	99.95
AN-102 LW/MW/SW indoor active rcv ant	89.95	79.95
AN-LP1 Folding active loop ant w/case	99.95	89.95
ICF-SC1 300 ch pocket scanner	329.95	249.95
ICF-SC1PC 300ch pock scanner/PC interface	429.95	319.95
AC-E60HG 6vdc 400ma AC adapter	22.99	
DCC-E260 Mobile DC adapter	19.99	
ICF-B200 AM/FM emergency radio/light/alarm	99.95	79.95

STANDARD (STA)

CAW-151B 12vdc ps cable; C156A Δ	$ 18.95	10.95
CHP-150 Headset mic w/VOX; C156A Δ	87.95	39.95
CLC-157 Soft case; CNB-157; C156A Δ	23.95	9.95
CNB-155 4.8v 600ma 2.5w nicad; 156A Δ	30.95	9.95
CWC-156A Cgr; CNB155/156/157/158; 156A Δ	9.95	4.95
C-558A 2m/440 HT/batt/cgr/TT/ctcss Δ	665.00	399.95
CAX-02 Bottom cover; 558A Δ	12.95	6.95
CBT-175 2 cell battery case; 558A Δ	17.00	2.95
CLC-152 Lrg case; C158A/CNB152/153 Δ	26.00	6.95
CLC-171 Soft case for CNB-171 Δ	30.95	9.95
CLC-172 Soft case for CNB-172/173 Δ	30.95	9.95
CLC-175 Soft case for CBT-175 Δ	30.95	9.95
CLC-550R Orange carrying case Δ	35.95	9.95
CLC-560 Case; CBT171/CN-171; 568A Δ	27.95	14.95

STANDARD - continued

	Reg	Sale
CLC-562 Leather case; CBT171/CNB171 Δ	52.95	19.95
CWC-151A Charger; 12v batteries Δ	28.00	9.95
CNB-160 Mini 6v 300ma nicad; 168A Δ	72.00	9.95
C-108A 200mw 2m FM HT Δ	269.00	149.95
CLC-401 Standard soft case; 108A Δ	16.95	9.95
CLC-503 Dlx soft case; 108A/508A Δ	19.95	6.95
CNB-401 Nicad battery Δ	22.95	9.95
CMP-127 Microphone for C-510A Δ	69.95	19.95
C-178A 2m/440 FM mini HT/TTP Δ	459.00	299.95
CAW-574 13' fnt panel extension cbl; 5718DA Δ	39.95	14.95
CTN-5600 Encoder/decoder; C-5608DA Δ	86.00	29.95

STARTEK (STR)

ATH-15 1-1500MHz bar graph freq counter Δ	$235.00	189.95
ATH-30 1-2800MHz bar graph ctr w/1-shot	299.00	249.95
ATH-30/HS 2800MHz/1-shot/hi-stability	424.00	349.95
ATH-50 5Hz-2800MHz bar/auto trig/hi speed	339.00	299.95
ATH-50/HS 2800MHzr/trig/hi spd/hi stability	464.00	399.95
APA-9/VPA-9 9vdc auto power adapter	7.95	
RD-2750 27-50MHz rubber duck antenna	19.95	
RD-450 450MHz rubber duck ant Δ	16.95	9.95
RD-800 800MHz rubber duck antenna	16.95	
TA-90 Telescopic antenna	12.95	
TA-90L Right angle telescopic antenna	16.95	
DC-5 BNC to clip leads cable Δ	12.95	8.95
M-207-IC Interface cable Δ	10.95	4.95
CC-90 Carrying case	12.95	
BP-150 130 - 500 MHz bandpass filter	49.95	
HP-400 400 - 1500 MHz bandpass filter	49.95	
HP-800 800 MHz - 2 GHz bandpass filter	49.95	
LP-60 DC - 60 MHz bandpass filter	49.95	
DC-10 Direct probe Δ	22.95	14.95
LP-22 Lo-pass probe Δ	29.95	9.95
P-60 Probe, 60MHz scope, 200MHz FC Δ	29.95	9.95
P-100 Probe, 100MHz scope, 300MHz FC Δ	39.95	14.95
P-110 Probe, 200MHz csope, 500 MHz FC	69.00	49.95
CAM-PHA-AES B&W pinhole TV cam/mic/ps D	136.00	99.95

SVETLANA (SVE)

4CX250B/7203 Tube	special order	$105.95
4CX400A Tube	special order	140.95
4CX800A Tube	special order	190.95
572B Tube		86.95
811A Tube D		25.95
8874/3CX400A7 Tube	special order	335.95

Other Tubes Available on Special Order

Synthetic Textiles (SYN)

100' 3/32" black double braided rope	$ 6.95
100' 3/16 3/16" black double braided rope	14.95
100' 5/16 5/16" black double braided rope	19.95
350' 3/16" black double braided rope	39.95

Terk Technologies (TER)

AF-9330 Amplified indoor AM/FM tower ant	$ 24.95
AF-9925 Amplified indoor AM/FM loop ant	49.95
AM-1000 Indoor passive fine-tunable AM ant	49.95
FM-50 Amplified indoor/outdoor FM ant kit	119.95
TV-50 Amplified indoor/outdoor TV ant kit	129.95
TV-MAST Mast mount kit for TV-50	19.95
TV-41 Clip-on mini dish mt amp TV ant; 1 LNB dish	59.95
TV-42 Clip-on mini dish mt amp TV ant; 2 LNB dish	79.95

Texas Bugcatcher (TEX)

BG-1500-6 80-10m+6m 90" mobile ant D	$165.95
BG-1500 80-10m 90" mobile ant	169.95
ADAPT-6M 6m adapter for BG-1500	19.95
BM-EXT 24" stainless mast extension/guy kit	24.95
CC-4 Package of 4 coil clips	7.95
MM-1 Inductive mobile matcher	24.95

TIMEWAVE/AEA

TIMEWAVE (TIM)

DSP-599zx All-mode DSP noise filter	$399.95
(AEA) AC-4 12vdc 1.5A ps	19.95

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

TIMEWAVE/AEA - continued

	Reg	Sale
DSP-RTTY RTTY prog; DSP-599zx/59Y	69.95	

TIMEWAVE/AEA DATA/SOFTWARE (AEA)

	Reg	Sale
DC-1 Cigarette lighter cord ....D	$ 7.95	1.95
PK-12 1200 bps VHF/UHF pkt controller	129.95	
100K/PK-12 100K mail upgrade; PK12 ....D	39.95	19.95
AC-1 12vdc 600 ma adaptor	15.95	
100K 100K mem upgrade; PK-96 ....D	39.95	29.95
PK-96/100K 9600 baud control/128K RAM	199.95	
AC-1 12vdc 600 ma adaptor	15.95	
PC Pakratt Lite Packet only term prog ....D	49.95	9.95
PK-232/DSP Packet controller w/DSP	450.95	
AC-4 12vdc 1.5A ps	19.95	
9600 bps modem card option; PK-900 ....D	75.95	39.95
ACARS/900 Air data receive soft; PK-900 ...D	50.95	29.95
AEA-FAX III-900 PK900/IBM FAX software ..D	129.95	39.95
IH CABLE PK-232 - Ico/Yae/Ali HT cable ....D	25.95	9.95
IW CABLE PK-232 - Icom W2A cable ....D	25.00	2.95
KH CABLE PK-232 - Ken HT cable ....D	25.95	4.95
PC-Pakratt II w/FAX Prog;12/88/232 ....D	69.95	49.95
PC-Pakratt for Win 2.0 IBM; 12/88/232	79.95	
PK-TERM 99 Terminal prog; PK-12/96/232 ..	79.95	
YM CABLE PK-232 - Yae 8pin mic cable ....D	25.95	9.95
WeFax-256 WX FAX Win program; 1232/2232	129.95	119.95
AA.COM SWR curve IBM soft; 121 & V/U ....D	75.00	9.95
DM-1 2m/220/440 FM deviation meter	169.95	
IDR-96 5w 441.05MHz data Xcv/9600 ....Δ	499.95	299.95
Morse University II Morse code Win soft w/exam	39.95	

TRIPP LITE (TRI)

	Reg	Sale
PR-7 5A power supply, 7A surge	$ 55.00	49.95
PR-10 7.5A power supply, 10A surge	79.00	69.95
PR-12 9A power supply, 12A surge	85.00	74.95
PR-20 16A power supply, 20A surge	125.00	99.95
PR-30 24A power supply, 30A surge	172.00	129.95
PR-40 32A power supply, 40A surge	211.00	169.95
PR-50 37A power supply, 50A surge	262.00	199.95
PR-60 48A power supply, 60A surge	309.00	239.95
PV-140 140w solid state 12vdc-115vac inverter	61.25	49.95
PV-300 300w solid state 12vdc-115vac inverter	89.95	74.95
TL-11 Trim Line small low prof 8A ps ....Δ	85.00	29.95
TLC-11 Trim Line large low prof 8A ps ....Δ	97.00	29.95
ISOBAR-4 4 outlet premium surge suppressor	79.95	49.95
ISOBAR-6 6 outlet premium surge suppressor	99.95	59.95
ISOBAR-8 ULTRA 8 outlet surge suppressor/LEDs	116.95	79.95
MT-6+ 6 outlet console surge suppressor	149.95	99.95
SUPER-7 7 outlet surge suppressor	27.95	19.95
SUPER-7+TEL 7 outlet/fax modem surge	38.95	29.95
TR-6 Surge Alert 6 out super suppressor ...Δ	59.95	19.95
TR-6FM Surge Alert+Tel 6 out super suppressor	69.95	49.95

TUBES (TUB)

6146W Tube	$ 26.95	
12BY7A Tube	12.95	
3-500G High dissipation tube (3-500Z)	119.95	
3-500Z	229.95	
572B Tube	49.95	
811A Tube	19.95	

Also see SVETLANA

TUNE BELT (TUN)

HH-1PS Up to 5" HT radio belt ....Δ	$ 19.95	4.95
HH-1PM Up to 6" HT radio belt ....Δ	19.95	6.95
HH-1PL Up to 7" HT radio belt ....Δ	19.95	4.95
HH-2PM To 6" HT radio belt/batt pocket ....Δ	21.95	6.95

US TOWER (UST)

FREE STANDING CRANK-UPS (T²X not recommended)

TX-438 38' crank-up tower ....T	1269.00	1142.95
TX-455 55' crank-up tower ....†T	1915.00	1399.95
TX-472 72' crank-up tower ....T	3147.00	2832.95
TX-472MDP 72' crank-up w/motor drive ...†T	5064.00	3899.95
TX-489 89' crank-up tower ....T	5475.00	4927.95
TX-489MDPL 89' crank-up w/motor drive ...T	8212.00	7390.95
TX-3106MDPLSP 106' crank-up/mot drive .†T	12999.00	11699.95

US TOWER - continued

FREE STANDING HEAVY DUTY CRANK-UP TOWERS

		Reg	Sale
HDX-538 38' crank-up tower ....T		1642.00	1477.95
HDX-555 55' crank-up tower ....†T		2874.00	2099.95
HDX-572 72' crank-up tower ....T		4927.00	4434.95
HDX-572MDPL 72' crank-up w/motor drive .T		7528.00	6775.95
HDX-589MDPL 89' crank-up w/motor drive .T		9855.00	8869.95
HDX-689MDPL 89' HD crank-up w/motor ....T		19039.00	17135.95
HDX-5106MDPL 106' HD crank-up w/motor T		20719.00	18647.95

COMPACT TMM (Top mount rotor for full retraction)

TMM-433SS 33' crank-up tower ....T		1355.00	1219.95
TMM-433HD 33' HD crank-up tower ....T		1642.00	1477.95
TMM-541SS 41' crank-up tower ....T		1779.00	1599.95

ACCESSORIES FOR CRANK-UP TOWERS

CX-2 Coax arms (2) for 2-section tower		$ 55.95	
CX-3 Coax arms (3) for 3-section tower		77.95	
CX-4 Coax arms (4) for 4-section tower		122.95	
CX-5 Coax arms (5) for 5-section tower		167.00	150.95
CX-6 Coax arms (6) for 6-section tower		212.00	190.95
HDP Service platform ....T		904.00	813.95
STS-4 Rotor accessory for TX/TMM towers ...T		235.00	211.95
IV-16 Inverted vee arm for MA's		41.95	
M-5 2" OD 5' mast extension for MA's		40.95	
M-10 2" OD 10' mast ....T		77.95	
M-15 2" OD 15' mast ....T		115.95	
M-20 2" OD 20' mast ....T		152.00	136.95
M-15R 2" OD 15' reinforced mast ....T		174.00	156.95
M-20R 2" OD 20' reinforced mast ....T		230.00	207.95
CM-20 2" OD 20' cromolly mast ....T		515.00	489.95
MD-75 Heavy duty 1 HP motor drive ....T		1108.00	997.95
MDP-750* Pull-down drive; TX-472/HDX-555 T		1724.00	1551.95
MDPL-1000* Pull-down drive; HDX-572 ....T		2340.00	2106.95
*Requires MCL-100 or RMC-1000 also			
MRF Mast raising fixture		298.00	268.95
MCL-100 Limit switch package		517.00	465.95
RMC-1000 Remote control w/limit switch		1108.00	997.95
RP-3 Rotor plate for 10" section		39.95	
RP-4 Rotor plate for 12½" section		47.95	
RP-5 Rotor plate for 15" section		52.95	
TRX-80 Raising fixture; TX-438/455;HDX-538/555 T		483.00	434.95
TRX-80HD Raising fixture;TX-472/489;HDX-572/589 T		635.00	571.95
TRX-100HD Raising fixture; HDX-689/5106 T		895.00	805.95
TB-2US Thrust bearing; 2" mast w/2 flange holes		110.95	

MA-SERIES TUBULAR TOWERS

MA-40 40' crank-up mast ....†T		1007.00	679.95
MA-550 55' crank-up mast ....†T		1704.00	1069.95
MA-550MDP 55' crank-up mast w/motor ....T		3258.00	2932.95
MA-770 70' crank-up mast ....T		2810.00	2529.95
MA-770MDP 70' crank up mast w/motor ....T		4445.00	3999.95
MA-850 85' crank-up mast ....T		4344.00	3909.95
MA-850MDP 85' crank-up mast w/motor ....T		5991.00	5391.95

MA-SERIES ACCESSORIES

CX-2M Coax arms (2) for MA-40		$ 59.95	
CX-3M Coax arms (3) for MA-550		88.95	
CX-4M Coax arms (4) for MA-770		148.00	133.95
CX-5M Coax arms (5) for MA-850		178.00	160.95
MAB-40 Hinged base for MA-40 ....T		402.00	361.95
MAB-550 Hinged base for MA-550 ....T		480.00	432.95
MAB-770 Hinged base for MA-770 ....T		581.00	522.95
MAB-850 Hinged base for MA-850 ....T		704.00	633.95
MAF-40 Raising fixture for MA-40		246.00	221.95
MAF-550 Raising fixture for MA-550 ....T		340.00	306.95
MAF-770 Raising fixture for MA-770 ....T		346.00	311.95
MAF-850 Raising fixture for MA-850 ....T		458.00	412.95
MARB-40 Rotor base accessory for MA-40 ..T		615.00	553.95
MARB-550 Rotor base accessory for MA-550 T		727.00	654.95
MARB-770 Rotor base accessory for MA-770 T		861.00	774.95
MARB-850 Rotor base accessory for MA-850 T		1018.00	916.95

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

UNADILLA (See W2AU)

UNIDEN (UNI)

	Reg	Sale
CT-301 Cordless phone ....D	$ 69.95	24.95
EXS-9110 900MHz dig spread spec cordless D	179.95	89.95
XC-3510 25 ch cordless phone ....D	109.95	29.95
EHD-1200GB 900MHz Harley black cordless .	149.95	99.95
EXA-7950 900MHz cordless ph/dig ans mach	169.95	84.95
EXP-7902 900MHz cordless phone	89.95	49.95
EXS-9960 900MHz dig spread spec crdls/call ID	219.95	129.95
PC-76XLW AM Mobile CB w/WX alert ....D	189.95	119.95
PRO-340XL 40 ch port CB/rubber ant ....D	89.95	49.95
PRO-350XL 40 ch handheld CB ....D	169.95	89.95
PRO-501AXL AM Mobile CB w/mag ant ....D	69.95	39.95
Grant-XL SSB/AM Mobile CB ....D	259.95	159.95
PC-68LTW AM Mobile CB w/WX alert	159.95	99.95
PC-68XL AM Mobile CB	139.95	89.95
PC-78LTW AM Mobile CB w/WX alert	197.95	129.95
PC-78XL AM Mobile CB	189.95	109.95
PRO-501XL AM Mobile CB	49.95	39.95
PRO-510XL AM Mobile CB	69.95	44.95
PRO-510AXL AM Mobile CB w/mag mt ant	69.95	49.95
PRO-520XL AM Mobile CB	89.95	59.95
PRO-538W AM Mobile CB w/WX	109.95	69.95
PC-122XL SSB/AM Mobile CB	199.95	109.95
Grant-LT SSB/AM Mobile CB	279.95	169.95
Washington SSB/AM Base CB	349.95	229.95
ESP-26 External speaker	16.95	

UNIDEN BEARCAT

	Reg	Sale
BC-147XLT-1 16 ch prog scanner/instant WX D	$169.95	99.95
BC-178XLT 100 ch prog scan/air/WX alert .D	229.95	139.95
BC-860XLT 100 ch prog scanner/air/800 ....D	319.95	179.95
BCT-10 Pre-prog hiway info sys scan ....D	369.99	99.95
BC-244CLT 30 ch scanner w/instant WX	159.95	99.95
BC-248CLT 50 ch scanner w/WX alert	179.95	109.95
BC-278CLT 100 ch scanner/SAME WX alert ..	299.95	189.95
BC-350A 50 ch prog/service search w/AC ps	199.95	119.95
BCT-7 Pre-prog warning scan/air/800/AC ps	319.95	179.95
BCT-12 Pre-prog mobile warning scanner	299.95	179.95
BC-002 CTCSS tone board; BC-760XLT	51.95	
BC-003 Switch box for BC-002	10.95	
BC-004 RF preamp for BC-760XLT	27.95	
BC-895XLT 300 ch prog scanner/trunking	499.95	219.95
BC-9000XLT 500 ch 25MHz-1.3GHz	699.95	429.95
BC-005 CTCSS tone board; 8500/9000XLT	37.95	
BC-60XLT-1 30ch prog pocket; use AA batts .	169.95	99.95
BC-80XLT 50 ch prog pocket scanner/800	249.95	149.95
UA-502 Cig power cord	11.95	
AD-100 AC adapter/batt cgr; earlier scanners	16.95	
AD-140 Extra charger; BC-100XLT/200XLT	13.95	
BP-70 Extra battery for BC-70XLT ....Δ	27.95	
BP-200 Extra battery; BC-200XLT	26.95	
BP-205 Extra battery; BC-100XLT	26.95	
PS-001 DC power cord; original BC-60XLT .Δ	8.95	6.95
BC-120XLT 100 ch prog pocket w/aircraft	249.95	149.95
SC-150B 100 ch black sport pocket/800 ....D	299.95	179.95
SC-180B 100 ch sport pocket/800 MHz	299.95	189.95
AD-70 Extra charger	10.95	
BP-120 Extra battery	18.95	
LC-120 Carrying case; BC120XLT/230XLT ..	19.95	
LC-150B Carrying case for SC-150B/180B	19.95	
(KOS) **QZ/99** Noise reduction headphones .	59.99	
UA-502 Cig power cord	11.95	
BC-235XLT 300ch prog pock/trunk/xtra batt D	499.95	199.95
BC-245XLT 300ch pocket/trunk/smart scan .	499.95	229.95
BP-180 Extra battery	16.95	

UNIDEN - continued

	Reg	Sale
CRX-120 Desk charger; BC-245XLT	24.95	
LC-120 Carrying case	19.95	
UA-502 Cig power cord	11.95	
BC-3000XLT 400 ch 25MHz-1.3GHz pocket	699.95	399.95
BP-2500 Extra batt; BC2500/3000	63.95	
LC-2500 Carrying case; BC-2500/3000XLT	20.95	
UA-502 Cig power cord	11.95	
NPD-001 National frequency book Δ	14.95	9.95
RFD-001 IN/IL/KY/OH/MI/WI freq book	14.95	
MC-535 25w 90 ch VHF marine Xcvr	199.99	109.95
MC-1010 25w VHF marine Xcvr	299.99	139.95
MC-1020 25w VHF marine Xcvr	319.99	149.95
HH-940 1w submersible VHF marine hand-held D	309.99	129.95
HH-940P 1w submersible VHF marine hand-held	309.99	149.95
HH-955 5w VHF marine hand-held	199.99	129.95
HH-980 5w 90 ch deluxe marine hand-held	399.99	199.95

Unified Microsystems (UNM)

XT-4 Small size CW memory keyer	$ 79.95	
KC-4 Cable set for XT-4 to transceiver	9.95	
W9XT Contest card for IBM PC & compatible	149.95	
CCC-4 4pin mic contest card cable semi-kit	44.95	
CCC-8 8pin mic contest card cable semi-kit	44.95	

Universal Towers (UNT)

4-30 4 sq ft wind load 30' alum tower	T	$348.00	313.95
9-30 9 sq ft wind load 30' alum tower	T	469.00	422.95
12-30 12 sq ft wind load 30' alum tower	T	616.00	554.95
21-30 21 sq ft wind load 30' alum tower	T	732.00	658.95
23-30 23 sq ft wind load 30' alum tower	T	969.00	872.95
35-30 35 sq ft wind load 30' alum tower	T	1092.00	982.95
4-40 4 sq ft wind load 40' alum tower	T	584.00	525.95
7-40 7 sq ft wind load 40' alum tower	T	734.00	660.95
9-40 9 sq ft wind load 40' alum tower	T	818.00	736.95
12-40 12 sq ft wind load 40' alum tower	T	969.00	872.95
15-40 15 sq ft wind load 40' alum tower	T	1083.00	974.95
21-40 21 sq ft wind load 40' alum tower	T	1203.00	1082.95
23-40 23 sq ft wind load 40' alum tower	T	1440.00	1296.95
4-50 4 sq ft wind load 50' alum tower	T	823.00	740.95
5-50 5 sq ft wind load 50' alum tower	T	936.00	842.95
7-50 7 sq ft wind load 50' alum tower	T	1053.00	947.95
9-50 9 sq ft wind load 50' alum tower	T	1171.00	1053.95
15-50 15 sq ft wind load 50' alum tower	T	1555.00	1399.95
16-50 16 sq ft wind load 50' alum tower	T	1678.00	1510.95
4-60 4 sq ft wind load 60' alum tower	T	1172.00	1054.95
6-60 6 sq ft wind load 60' alum tower	T	1437.00	1293.95
7-60 7 sq ft wind load 60' alum tower	T	1529.00	1376.95
9-60 9 sq ft wind load 60' alum tower	T	1640.00	1476.95
3-70 3 sq ft wind load 70' alum tower	T	1527.00	1374.95
4-70 4 sq ft wind load 70' alum tower	T	1877.00	1689.95
6-70 6 sq ft wind load 70' alum tower	T	1911.00	1719.95
7-70 7 sq ft wind load 70' alum tower	T	1996.00	1796.95
3-80 3 sq ft wind load 80' alum tower	T	2059.00	1853.95
4-80 4 sq ft wind load 80' alum tower	T	2384.00	2145.95
2-90 2 sq ft wind load 90' alum tower	T	2470.00	2223.95
B-14 Base for tower		65.95	
B-18 Base for tower		65.95	
B-22 Base for tower		110.28	99.95
B-26 Base for tower		141.78	127.95
Extra **14" stubs** (between base & tower)	.set	12.95	
Extra **18" stubs** (between base & tower)	.set	24.95	
Extra **22" stubs** (between base & tower)	.set	40.95	
Extra **26" stubs** (between base & tower)	.set	40.95	
Extra **30" stubs** (between base & tower)	.set	60.95	
RFM-11 Flat roof mt for guyed tower		44.95	
RFM-14 Flat roof mt for guyed tower		44.95	
RFM-18 Flat roof mt for guyed tower		69.95	
RFM-22 Flat roof mt for guyed tower		103.95	93.95
RFM-26 Flat roof mt for guyed tower		138.66	124.95
R-11 Rotor mount		31.95	
R-14 Rotor mount		47.95	
R-18 Rotor mount		63.95	

UNIVERSAL - continued

SEE LITERATURE FOR CONFIGURATION OF TOWERS

		Reg	Sale
11 Top 11" top tower section	T	118.20	106.95
14 Top 14" top tower section	T	148.94	134.95
18 Top 18" top tower section	T	270.10	243.95
14 Taper 14" taper tower section	T	131.04	117.95
18 Taper 18" taper tower section	T	235.04	211.95
22 Taper 22" taper tower section	T	350.48	315.95
26 Taper 26" taper tower section	T	471.12	424.95
11 Straight 11" straight tower section	T	116.48	104.95
14 Straight 14" straight tower section	T	131.04	117.95
18 Straight 18" straight tower section	T	235.04	211.95
22 Straight 22" straight tower section	T	350.48	315.95
26 Straight 26" straight tower section	T	471.12	424.95
HD35-40 35 sq ft wind load 40' alum tower	T	1681.00	1512.95
HD21-50 21 sq ft wind load 50' alum tower	T	1793.00	1613.95
HD9-60 9 sq ft wind load 60' alum tower	T	1880.00	1692.95
HD16-60 16 sq ft wind load 60' alum tower	T	2265.00	2038.95
HD21-60 21 sq ft wind load 60' alum tower	T	2386.00	2147.95
HD8-70 8 sq ft wind load 70' alum tower	T	2115.00	1903.95
HD12-70 12 sq ft wind load 70' alum tower	T	2620.00	2358.95
HD17-70 17 sq ft wind load 70' alum tower	T	2858.00	2572.95
HD21-70 21 sq ft wind load 70' alum tower	T	2978.00	2680.95
HD8-80 8 sq ft wind load 80' alum tower	T	2707.00	2436.95
HD9-80 9 sq ft wind load 80' alum tower	T	2824.00	2541.95
HD11-80 11 sq ft wind load 80' alum tower	T	3208.00	2887.95
HD12-80 12 sq ft wind load 80' alum tower	T	3213.00	2891.95
HD16-80 16 sq ft wind load 80' alum tower	T	3449.00	3104.95
HD4-90 4 sq ft wind load 90' alum tower	T	2818.00	2536.95
HD8-90 8 sq ft wind load 90' alum tower	T	3325.00	2992.95
HD11-90 11 sq ft wind load 90' alum tower	T	3802.00	3421.95
HD4-100 4 sq ft wind load 100' alum tower	T	3775.00	3397.95
HD8-100 8 sq ft wind load 100' alum tower	T	4039.00	3635.95
B-30 Base for HD tower		221.50	199.95
RFM-30 Flat roof mt for guyed tower		193.98	174.95
1-5/8SC Flange bearing		94.95	
2-3/16SC Flange bearing		120.64	108.95
Top Plate Flange plate welded to top section		23.95	

SEE LITERATURE FOR CONFIGURATION OF TOWERS

30 Taper 30" taper tower section	T	592.80	533.95
30 Straight 30" straight tower section	T	592.80	533.95
1-1/4" OD x 5 ft aluminum mast	T	22.95	
1-1/4" OD x 10 ft aluminum mast	T	31.95	
1-1/2" OD x 10 ft aluminum mast	T	39.95	
2" OD x 8 ft aluminum mast		47.95	
2" OD x 16 ft aluminum mast	T	94.95	

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VALOR (See PRO AM)

VANCO (VCO)

370052 3½" digital multimeter	$ 19.95	
SWR-1 SWR/field strength meter	36.14	19.95
SWR-3 Mini SWR meter	21.68	14.95

VAN GORDEN (VAN)

Hi-Q 1:1 balun	$ 14.95	
Hi-Q 4:1 balun	14.95	
Antenna center insulator	6.95	
Antenna end insulator pair	4.95	
Dog bone type antenna insulator each	.95	
NR-100 Nylon antenna guy rope 100 ft.	4.95	
NR-1,000 Nylon ant guy rope 1,000 ft.	44.95	

VAN GORDEN - continued

	Reg	Sale
D-80 80m 130' wire dipole antenna	32.95	
SD-80 Short 90' 80m dipole	36.95	
D-40 40m 66' wire dipole antenna	29.95	
SD-40 Short 45' 40m dipole	34.95	
D-20 20m 33' wire dipole antenna	28.95	
D-15 15m 22' wire dipole antenna	27.95	
D-10 10m 16' wire dipole antenna	26.95	
All Bander Dipole 160-10m (use tuner) 135' ant	29.95	
Shorty All Bander 160-10m (use tuner) 70' ant	44.95	
G5RV Flat-top 5-band 102' ant/xmfr/100' cable	50.95	
G5RV-E Flat-top 5-band 102' ant/31' twinlead	28.95	
G5RV JR Flat-top 4-band 52' ant/17' twinlead	24.95	
G5RV-M Flat-top 5-band 204' ant/65' twinlead	50.95	
N connector Type N connector for 9913	4.95	
#14 Stranded hard drawn ant wire **100** ft.	11.95	
#14 Stranded hard drawn ant wire **150** ft.	16.95	
300 ohm 1kw transmitting twinlead **100** ft.	19.95	
450 ohm 18ga solid ladderline **100** ft.	12.95	
450 ohm 18ga solid ladderline **1,000** ft.	110.00	99.95
450 ohm 14ga stranded ladderline **100** ft.	24.95	
450 ohm 14ga stranded ladderline **1000** ft.	220.00	199.95
(WA1) WA1FFL **Ladder-Loc** 450 ohm ctr ins	12.95	
RG-213 Non-contaminating per ft.		49¢
RG-213/500 Non-contaminating .500 ft. Roll	199.95	179.95
8X-1.5ST 1.5' RG-8X coax/silver teflon PL259s	7.95	
8X-3ST 3' RG-8X coax/silver teflon PL259s	8.95	
8X-6ST 6' RG-8X coax/silver teflon PL259s	10.95	
8X-12ST 12' RG-8X coax/silver teflon PL259s	11.95	
8X-25ST 25' RG-8X coax/silver teflon PL259s	15.95	
8X-50ST 50' RG-8X coax/silver teflon PL259s	24.95	
8X-75ST 75' RG-8X coax/silver teflon PL259s	31.95	
8X-100ST 100' RG-8X coax/silver teflon PL259s	37.95	
213-3ST 3' RG-213 coax/silver teflon PL259s	11.95	
213-6ST 6' RG-213 coax/silver teflon PL259s	14.95	
213-12ST 12' RG-213 coax/silver teflon PL259s	18.95	
213-25ST 25' RG-213 coax/silver teflon PL259s	25.95	
213-50ST 50' RG-213 coax/silver teflon PL259s	38.95	
213-75ST 75' RG-213 coax/silver teflon PL259s	54.95	
213-100ST 100' RG-213 coax/silver teflon PL259s	72.95	

VECTRONICS (VEC)

VC-300M 300w mobile antenna tuner	$109.95	99.95
VC-300DLP 300w antenna tuner	159.95	149.95
VC-300D 300w digital antenna tuner	199.95	179.95
HFT-1500 1.5kw antenna tuner	459.95	399.95
AT-100 .3-30 MHz active antenna/tuner	79.95	
HPF-1 High pass filter, 75 or 300 ohms	24.95	
HPF-2 Deluxe high pass filter, 75 or 300 ohms	29.95	
LP-30 1.5kw low pass filter	49.95	
LP-2500 2.5kw low pass filter	79.95	
CK-200 Deluxe keyer	79.95	
DL-300M 300w dummy load	44.95	
DL-650M 1.5kw dummy load	74.95	
DL-2500 2.5kw dummy load	199.95	179.95
PM-30HF 300/3kw HF wattmeter	79.95	
PM-30UV 30/300w VHF/UHF wattmeter	89.95	
AC-12 12vdc 300ma adapter	14.95	
PS-30F 25A power supply, 30A surge	129.95	
PS-50F 35A power supply, 50A surge	199.95	
121K Crystal radio set kit	19.95	
131K Aircraft receiver kit	29.95	
201K CW keyer kit	24.95	
412K Nicad/NiMH battery conditioner kit	49.95	
422K FM broadcast SCA decoder kit	27.95	
820K Super CW audio filter kit, 750Hz center	19.95	
821K Super CW audio filter w/1w amp kit	29.95	
830K Super SSB audio filter kit	19.95	
841K Tunable SSB/CW audio filter kit	34.95	
1140K 40m receiver kit	29.95	
1240K 40m QRP CW transmitter kit	29.95	
1290K AM radio transmitter kit	29.95	
1294K TV transmitter kit	27.95	
1402K 2m preamp kit	17.95	

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VECTRONICS - continued

	Reg	Sale
1422K 220MHz preamp kit	17.95	

VIBROPLEX (VIB)

	Reg	Sale
090 Original Gold Bug	$329.95	299.95
100 Original Presentation Super deluxe bug	289.95	269.95
105 Original Deluxe Bug	199.95	
110 Original Standard Bug	159.95	
113 VibroKeyer Gold Paddle	299.95	269.95
115 VibroKeyer Deluxe Paddle	179.95	
120 VibroKeyer Standard Paddle	139.95	
123 Iambic Gold Paddle	299.95	269.95
125 Iambic Presentation Paddle	259.95	239.95
130 Iambic Deluxe Paddle	179.95	
135 Iambic Standard Paddle	139.95	
145 Triangular Brass Racer Iambic paddle	99.95	
150 Square Brass Racer Iambic paddle	139.95	
153 Gold straight key	299.95	269.95
155 Standard straight key	139.95	
160 Deluxe straight key	179.95	
162 Gold Hand key/Iambic Paddle double	399.95	359.95
163 Gold Hand key/VibroKeyer Paddle double	399.95	359.95
165 Deluxe Hand key/Iambic Paddle double	349.90	319.95
170 Dlx Hand key/VibroKeyer Paddle double	349.90	319.95
175 Standard Hand key/Iambic Paddle double	299.95	269.95
180 Std Hand key/VibroKeyer Paddle double	299.95	269.95
185 Square Racer Deluxe Iambic paddle	134.95	
190 Square Racer Standard Iambic paddle	109.95	
195 Blue Racer 2000 Millennium Bug	179.95	
200 Code Warrior Junior Paddle	99.95	

WA1FFL (WA1)

Ladder-Loc 450 ohm ladderline center attach	$ 12.95	

W2AU (Unadilla) (W2A)

W2AU 1:1 160-10m balun, lightning arrestor	$ 24.95	
W2AU Beam Balun, 1:1	24.95	
W2AU 4:1 160-10m balun, lightning arrestor	24.95	
W2DU-HF 1:1 1.8-30 MHz choke balun	26.95	
W2DU Beam Balun 40-10m 1:1 choke balun	26.95	
W2DU-VHF 1:1 30-250 MHz choke balun	26.95	
HA AN-sulator center insulator	9.95	
HE END-sulator end insulators ....pair	4.95	
KW-80CW Reyco 80m CW ant traps ....pair	48.95	
KW-80F Reyco 75m phone ant traps ....pair	48.95	
KW-40 Reyco 40m antenna traps ....pair	42.95	
KW-30 Reyco 30m antenna traps ....pair	42.95	
KW-20 Reyco 20m antenna traps ....pair	41.95	
KW-17 Reyco 17m antenna traps ....pair	41.95	
KW-15 Reyco 15m antenna traps ....pair	41.95	
KW-12 Reyco 12m antenna traps ....pair	41.95	
KW-10 Reyco 10m antenna traps ....pair	41.95	
W2AU/W2VS 5-band ant kit (use tuner)	85.95	

W5YI (W5Y)

	Reg	Sale
GCSP Gordon West Gen code tapes/manual ....D	$ 19.90	14.95

W5YI - continued

	Reg	Sale
GTSP Gordon West Gen theory tapes/manual ...D	19.90	14.95
GUS General Upgrade Software	34.95	
GWAM Gordon West Advanced study manual	11.95	
GWAW Gordon West Adv written theory tapes	19.95	
GWE6 Gordon West 6 ea 10-28 wpm code tapes	29.95	
GWEM Gordon West Extra study manual	11.95	
GWET Gordon West Extra code tapes	9.95	
GWEW Gordon West Extra written theory tapes	19.95	
GWG6 Gordon West 6 ea 5-16 wpm code tapes	29.95	
GWGM Gordon West General study manual	11.95	
GWGT Gordon West General code tapes	9.95	
GWGW Gordon West General theory tapes	9.95	
GWN6 Gordon West 6 ea 0-7 wpm code tapes	29.95	
GWNT Gordon West Novice Code Teacher	9.95	
GWNW Gordon West Novice theory tapes	9.95	
GWT6 Gordon West No-Code Tech theory tapes	29.95	
GWTM Gordon West No-Code Tech manual	12.95	
GWTW Gordon West Tech theory tapes	9.95	
HOS Ham operator software package	39.95	
NCSW No-code ham radio WIN soft package	34.95	
NCVP Ham No-Code video seminar w/manual	31.95	
TPG Tech/TechPlus/General manuals/soft/code	49.95	

WAHL (WAH)

7740 Quick charge cordless soldering iron kit	$ 47.95	

WALNUT CREEK (WAL)

Antennas Antennas CD-ROM	$ 29.95	
Garbo 250 MB DOS + 150 MB Mac ....D	29.95	99¢
Giga Games 3,000 DOS/Windows games ....Δ	39.95	2.95
Ham QRZ US & Canada calls plus programs	29.95	
Hobbes 1,000's of OS/2 applications ....Δ	29.95	99¢

WELLER (WEL)

7200PK 75w soldering gun kit	$ 27.95	
EC-1002-1 40w temp controlled solder stn	244.49	199.95
WP-25 25w professional soldering iron	32.95	
W-60P 60w temp controlled soldering iron	62.95	
WSTA3 Pyropen portable LP soldering iron	107.49	99.95
WST2 Pyropen Jr. portable butane iron	86.95	
WTCPT 60w temp controlled soldering stn	136.28	119.95

WILSON (WIL)

Little Wil Magnetic mt CB antenna	$ 29.95	
Trucker 2000 Black mobile ⅜-24 CB whip	59.95	54.95
W-1000 Magnetic Black mobile CB antenna	79.95	72.95
W-1000 Roof Top Black mobile CB antenna	59.95	54.95
W-1000 Trunk Lip Black mobile CB antenna	69.95	62.95

WINEGARD (WIN)

CX-0625 25' RG-6 TV coax w/F connectors	$ 10.95	
CX-0650 50' RG-6 TV coax w/F connectors	15.95	
CX-0675 75' RG-6 TV coax w/F connectors	19.95	
CX-6100 100' RG-6 TV coax w/F connectors	24.95	
DS-2000 Universal pipe/tower mt; TV ant	16.95	
GS-2000 Amplified Sensar II TV antenna	103.43	79.95

WINEGARD - continued

	Reg	Sale
LB-2000 Dual output digital LNBF	75.95	
PR-7010 22 el 66.5" boom Prostar TV ant	51.15	39.95
PR-7032 33 el 103.25" boom Prostar TV ant	80.85	64.95
PR-7042 43 el 149.75" boom Prostar TV ant	121.35	99.95
TV-2900 Outdoor TV matching transformer	2.95	
SM-2200 Base scanner ant/50' cbl/F connectors	45.95	

X-10 (X10)

HOME AUTOMATION/SECURITY

CK-11A X-10 ActiveHome automation/win soft Δ	$119.99	69.95
DS-7000 7-piece home security system ....Δ	269.99	159.95
PK-9 REX-10 barking dog alarm ....Δ	79.99	49.95
DM-10A Motion detector for REX-10 ....Δ	34.99	19.95
AM-466 3-pin grounded appliance module Δ	16.99	10.95
AM-486 2-pin polarized appliance module Δ	15.99	9.95
DS-10A Long range door/window sensor ....Δ	31.99	18.95
DW-534 Door/window sensor ....Δ	21.99	12.95
KF-574 Key fob security remote control ....Δ	26.99	15.95
LM-465 Lamp module ....Δ	15.99	9.95
MC-460 6 function 8 unit mini controller ...Δ	15.99	7.95
PH-508 Remote 110 db siren ....Δ	59.99	29.95
PR-511 2 floodlite motion detect/rem light Δ	64.99	39.95
RW-694 4 unit wireless wall switch ....Δ	21.99	9.95
RW-724 3 unit+dimmer wirels wall switch Δ	19.99	9.95
RW-6900 Wireless wall switch set ....Δ	31.99	16.95
SC-503 6 function 16 unit maxi controller .Δ	29.99	15.95
SH-10A Indoor 90 db remote alarm siren ...Δ	31.99	18.95
SP-554A Wireless motion detector ....Δ	59.99	36.95
SR-227 Wall receptacle mod/custom plate .Δ	21.99	14.95
TH-2807 Thermostat set-back controller ....Δ	21.99	12.95
WS-467 Wall switch module ....Δ	15.99	9.95

YAESU (YAE)

FT-1000MP/DC HF Xcvr/EDSP/tuner ....Δ	3399.00	2699.95
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
FT-1000MP 9-band Xcvr/EDSP/tuner/ps	3699.00	2799.95
DVS-2 Digital voice recording module	238.00	219.95
FH-1 Remote control keypad	88.95	
MD-100A8X Desk mic w/tone control	138.00	129.95
MH-31B8 Extra hand microphone	39.95	
SP-8 External speaker w/filters	173.00	159.95
LL-7 Phone patch unit for SP-8	153.00	139.95
TCXO-4 TCXO unit	99.95	
TCXO-6 Deluxe TCXO unit, 0.5 ppm	190.00	174.95
YF-110CN 250 Hz 3rd IF main Rcvr CW filt	157.00	144.95
YF-110SN 2 KHz 3rd IF main Rcvr SSB filt	157.00	144.95
YF-114CN 250 Hz 2nd IF main Rcvr CW filt	157.00	144.95
YF-114SN 2 KHz 2nd IF main Rcvr SSB filt	157.00	144.95
YF-115C 500 Hz CW Collins mech filter	173.00	159.95
YH-77ST Open-air type stereo headphones	51.95	
FT-1000 Xcv/ps/tune/kyr/mic/XF-AB spec order	4399.00	3399.95
BPF-1 Dual bandpass filt; crossband rcv Δ	196.00	179.95
TCXO-1 Temp compensated xtal osc ....Δ	190.00	174.95
XF-C 2.4KHz SSB xtal filt (455KHz) ....Δ	157.00	144.95

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YAESU - continued

	Reg	Sale
YF-110SN/XF-D 2 KHz SSB xtal filt (455 KHz)	157.00	144.95
YF-115C 500 Hz CW Collins mech filter	173.00	159.95
FT-1000D Dlx Xcvr w/BPF/TCXO/XF-ABCDE	5459.00	4199.95
DVS-2 Digital voice recording module	238.00	219.95
FIF-232C Interface for RS-232	95.95	
MD-100A8X* Desk mic w/tone control	138.00	129.95
*Cable needed for FT-1000D contact service for info		
SP-5 External spkr w/audio filter	157.00	144.95
LL-5 Phone patch unit for SP-5	143.00	129.95
XF-455MC 600Hz CW filter (455KHz); subrcvr	157.00	144.95
YF-110CN/XF-F 250 Hz CW xtal filter (455 KHz)	157.00	144.95
YH-77ST Open-air type stereo headphones	51.95	
FT-920 9-band Xcvr/AF-DSP/tuner/6m/kyr	2299.00	1449.95
FM-1 FM unit FREE with FT-920! Limited Time!		
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
FM-1 FM unit	62.95	
MD-100A8X Desk mic w/tone control	138.00	129.95
SP-8 External speaker w/filters	173.00	159.95
LL-7 Phone patch unit for SP-8	153.00	139.95
TCXO-7 TCXO unit	99.95	
YF-116A 6 KHz AM filter	127.00	119.95
YF-116C 500 Hz CW filter	127.00	119.95
YH-77ST Open-air type stereo headphones	51.95	
FT-847 HF/6m/2m/430 Earth Station Xcvr/mic	2336.00	*1599.95
***Sale price w/instant coupon; coupon expires 11/30/99**		
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
ATAS-100 HF/6/2/430 motorized mob ant	349.00	319.95
ATBK-100 Antenna base kit; use w/base mt	89.95	
CT-61 Interface cable; FT-847 to amp	15.95	
FC-20 Automatic antenna tuner	299.00	269.95
FVS-1A Voice synthesizer	43.95	
MD-100A8X Desk mic w/tone control	138.00	129.95
MH-36D8 DTMF mobile microphone	60.95	
MMB-66 Mobile mounting bracket	39.95	
SP-8 External speaker w/filters	173.00	159.95
LL-7 Phone patch unit for SP-8	153.00	139.95
YF-115C 500 Hz CW Collins mech filter	173.00	159.95
YF-115S-02 2.5 KHz SSB Collins mech filt	173.00	159.95
YH-77ST Open-air type stereo headphones	51.95	
FT-840 Xcvr/SW Rcvr	921.00	739.95
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
FC-10 External coax fed auto tuner	429.00	379.95
FC-800 External long wire auto tuner	525.00	439.95
FIF-232C Interface for RS-232	95.95	
FM-747 FM unit	62.95	
MD-100A8X* Desk mic w/tone control	138.00	129.95
*Cable needed for FT-840 contact service for info		
MMB-20 Mobile mount	34.95	
SP-6 External speaker w/filter	157.00	144.95
SP-7 Mobile speaker	40.95	
TCXO-4 TCXO unit	99.95	
YF-112A 6 KHz AM filter	127.00	119.95
YF-112C 500 Hz CW filter	127.00	119.95
YH-77ST Open-air type stereo headphones	51.95	
FT-100 Mini HF Xcvr/6m/2m/440/DSP/TTP mic	1689.00	1299.95
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
ATAS-100 HF/6/2/430 motorized mob ant	349.00	319.95
ATBK-100 Antenna base kit; use w/base mt	89.95	
CT-39 Packet cable	9.95	
CT-58 Band data cable	29.95	
CT-62 CAT interface cable	29.95	
FC-20 Automatic antenna tuner	299.00	269.95
FTS-27 CTCSS decoder unit	47.95	
MMB-62 Remote front panel mounting bkt	39.95	
MMB-67 Quick release bracket	29.95	
SP-6 External speaker w/filter	157.00	144.95
LL-5 Phone patch unit for SP-6	143.00	129.95
SP-7 Mobile speaker	40.95	
TCXO-8 TCXO unit	99.95	
XF-117A 6 KHz AM filter	127.00	119.95

YAESU - continued

	Reg	Sale
XF-117C 500 Hz CW filter	157.00	149.95
XF-117CN 300 Hz CW filter	157.00	149.95
Suggest dealer installation of filters in FT-100; only two sockets available; use XF-117C & XF-117A OR XF-117CN		
YH-77ST Open-air type stereo headphones	51.95	
YSK-100 Separation kit	79.95	
ATU-2 Internal auto ant tuner; FT-900 Δ	301.00	219.95
CT-11 Cable - FL-7000 to FT-890/900 Δ	19.95	
CT-20 Mic cable for use with MD-1C8 D	22.95	9.95
CT-26 Mic adapter cable; modular to 8-pin Δ	22.95	
E-767 Cable - FL-7000/767/990/1000/MP Δ	16.95	
FAS-1-4R Remote antenna selector	143.00	129.95
FRB-757 External relay box	31.95	
FX-1 Transceiver-FAX interface/controller D		19.95
MH-31A8J Extra hand mic; FT-900 Δ	39.95	
XF-110C 455 KHz 500 Hz CW filter; FT-900 D	157.00	129.95
YA-30 1.8-30 MHz broadband dipole ant	269.00	239.95
YH-77ST Open-air type stereo headphones	51.95	
YS-60 1.8-60 MHz 2kw PEP wattmeter	139.00	129.95
YS-500 140-520 MHz 200w PEP wattmeter	114.00	109.95
YSK-900 20' rem mtg kit/tnk mtg bkt; FT-900 Δ	68.95	49.95
Quadra System VL/VP1000 160-6 amp/ps/tuner	5990.00	3999.95
MR-1000 Quadra system mounting rack	299.95	
FRG-100B .1-30 MHz shortwave receiver	739.00	619.95
FM Unit-100 FM unit	47.95	
TCXO-4 TCXO unit	99.95	
YF-110CN/XF-F 250 Hz CW xtal filter	157.00	144.95
YF-115C 500 Hz CW Collins mech filter	173.00	159.95
VR-500 .1M-1.3G AM/FM/SSB hand/cell blkd	399.00	349.95
51R Clone/CT-35 Clone cable; VR-500	9.95	
ADMS-3 Windows programming software	39.95	
CSC-72 Soft case for VR-500	19.95	
EDC-5B DC adapter w/noise filter	26.95	
EDC-6 DC adapter; plug & wire only	7.95	
FNB-59 Nicad battery for VR-500	23.95	
NC-60B Wall charger	14.95	
E-736 DC cable for FT-736R Δ	16.95	
FEX-736-50 6m module for FT-736R Δ	317.00	279.95
FEX-736-220 220 MHz module; FT-736R Δ	349.00	309.95
FEX-736-1.2 1.2 GHz module for FT-736R Δ	619.00	539.95
FTS-8 Encoder/decoder for FT-736R Δ	62.95	
Keyer-B Electronic keyer unit; FT-736R Δ	26.95	
TV-736 1.2 GHz ATV converter for FT-736R Δ	205.00	189.95
FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP D	749.00	559.95
CSC-19 Soft case	16.95	
FBA-8 Holder for 9 C-cell nicads	39.95	
NC-26B Wall charger for FBA-8	9.95	
FTS-7A Encoder/decoder; current units	44.95	
AD-3 100w 2m/440 duplexer	52.95	
DVS-3 Dig voice unit; FT-2200/5200/6200/7200 D	157.00	69.95
FRC-4 DTMF pager unit; FT-5200/6200 D	47.00	9.95
MH-27B8 8-pin TTP mic; FT-5200/6200 Δ	65.95	
MW-2* Wireless rem cont mic; 5200/6200 D	162.00	49.95
* Requires jumper modification		
MMB-53 Mobile mtg bkt for MW-2 Δ	8.95	5.95
YSK-1L Sep kit w/18' cable; FT-5200/6200 Δ	58.95	
FT-8100R 50/35w 2m/440 FM Xcvr/TTP	570.00	459.95
ADMS-2D Windows programming software	39.95	
CT-39 Packet cable	9.95	
FTS-22 CTCSS decode unit	68.95	
MEK-2 Mic extension kit	42.95	
MMB-60 Quick release mobile bracket	31.95	
YSK-8100 Remote separation kit	69.95	
FT-90R 50/35w 2m/440 Micro Commander FM Xcvr	499.00	399.95
ADMS-2E Windows programming software	39.95	
MEK-2 Mic extension kit	42.95	
SP-7 External speaker	40.95	
YSK-90 Remote separation kit	64.95	
MH-15D8 Autodial TTP microphone Δ	75.95	69.95
MH-39A6J Extra regular mic; FT-8500 Δ	104.95	94.95
YSK-8500 Remote separation kit; FT-8500 Δ	69.95	
FT-3000M 70w 2m FM Xcvr/TTP/ext rcv	505.00	399.95
ADMS-2D Windows programming software	39.95	

YAESU - continued

	Reg	Sale
CT-39 Packet cable	9.95	
DVS-4 Digital voice recording module	47.95	
FTS-17A CTCSS decode unit	47.95	
2400 Mic Cable 2' packet cable; 2400H/2500M Δ	9.95	
FRC-6 DTMF pager unit; FT-2500M/7400H Δ	47.00	9.95
MH-27A8J Early TTP mic/modular plug; 2500M Δ	60.95	
MH-36C8J Extra TTP mic; late FT-2500m Δ	60.95	
FT-2600M 60w compact 2m FM Xcvr/TTP mic	289.00	219.95
ADMS-2E Windows programming software	39.95	
SP-7 External speaker	40.95	
FP-712/Vertex 10A switching ps, 12A surge D	135.00	99.95
FP-1023 23A switching ps w/fan, 25A surge	169.00	159.95
FP-1030A 25A ps, 30A surge w/meters	269.00	249.95
LF-1 Mobile 13A DC noise filter	26.95	
MLS-100 Mobile speaker	45.95	
SP-3 Small mobile speaker	23.95	
SP-4 Mobile speaker	31.95	
VXR-5000VADC/Vertex 25w 2m FM rptrr	1635.00	1199.95
VXR-5000V/TA/Vertex 25w 2m FM rptr/ps	1909.00	1399.95
VXR-5000UCDC/Vertex 25w 440 FM rptr	1635.00	1199.95
VXR-5000U/TC/Vertex 25w 440 FM rptr/ps	1909.00	1399.95
Repeaters require service dept. set-up; $72 minimum		
COM ID-8 Auto morse code ID'er	69.95	
MR-KIT1 19" rack mtg kit; VXR repeater	218.00	199.95
VXD-40UB/Vertex 440 duplexer (untuned)	222.00	199.95
Tuning charge; duplexer (specify freqs)	50.95	
VX VPL-1D/Vertex PC prog cable & software	95.95	

Accessory for FT-208R/708R

FNB-2A Nicad battery pack Δ	$ 45.95	

Accessories for 09-series/03-series

FNB-4A 500ma 12v battery Δ	$ 62.95	
FTS-6 Encoder/decoder; 09-series D	35.00	9.95
MMB-21 Mobile bracket; also for 727R D	16.00	4.95

Accessories for FT-26/415/416/530

CA-8 2 chg sleeves; NC-50/FT-416/530 D	$ 27.95	4.95
CLIP-3 Belt clip Δ	7.95	
CSC-50 Vinyl case; 415/416/FNB25 D	16.00	2.95
FBA-12 AA cell holder Δ	19.95	
FT-23R-12 5w 2m FM HT/FNB-12S/cgr	242.00	179.95
FT-33R 5w 220 FM HT/batt/cgr	369.00	299.95
FT-911 1w 1.2 GHz FM HT/batt/cgr/TTP	549.00	469.95

Accs for FT-23R/33R/73R/411E/811/470/911

CA-7 2 charging sleeves; NC-50/411E/470	$ 27.95	
CLIP-1 Belt clip	7.95	
CSC-24S Soft case; 23R/33R/73R w/FNB-12S D	16.00	99¢
CSC-28 Soft case; 23R/33R/73R w/FNB-12S	16.95	
CSC-35 Soft case; FT-411E/811/911/FNB-17 D	16.00	99¢
CSC-36 Soft case; FT-411E/FNB-10/FBA-10 D	16.00	9.95
CSC-37 Soft case; FT-411E w/FNB-12S/14	16.95	
CSC-48 Soft case; 23R/33R/73R w/FNB-17 D	16.95	4.95
FBA-17 AA battery holder	19.95	
FNB-12S 600ma 12v (5w) battery	55.95	
FNB-14 1000ma 7.2v battery	55.95	
FNB-17 600ma 7.2v battery	34.95	
FTS-12 Encoder/decoder for FT-23R/33R/73R	60.95	
FTS-17A Tone squelch/pager; FT-411E	47.95	
FTT-4 DTMF (TTP) unit for FT-23R/33R/73R D	48.95	19.95
MH-30C2B Speaker/microphone	45.95	
MH-34C2B Compact lapel speaker/mic	30.95	
MH-35A2B Spkr mic/clip/earphone jack	39.95	
MMB-46 Mobile hanger for FT-470 D	25.00	4.95
NC-28B Extra wall charger for FNB-17	14.95	
NC-34B Wall charger for FNB-14	14.95	
NC-65B/NC-18B Wall charger for FNB-12S	14.95	
PA-6 Mobile DC adapter/cgr; FNB-14/17	31.95	
YH-2 Lightweight VOX headset w/mic	30.95	
FT-10/40B-A16S 2.5w 2m/16ky/99ch/DVR Δ	389.00	259.95
FT-40/41B-A16D 5w 440 HT/16key/99ch Δ	409.00	249.95
FT-40/41B-A16S 5w 440/16ky/99ch/DVRS Δ	429.00	269.95
FT-50RD/41B 5w 2m/440 HT/FNB41/FTT-12	375.00	269.95
ADMS-1E Windows programming software	39.95	
CA-15 Charging stand; FT-10/40/50	27.95	

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CLIP-10 Spring loaded belt clip	7.95	
CN-2 BNC to SMA adapter: FT-10/40	8.95	
CN-3 BNC to SMA adapter: FT-50R	8.95	
CSC-68 Soft case; FNB-41/FBA-15	16.95	
CSC-69 Soft case; FNB-40	16.95	
CSC-V10 Cordura soft case; FT-10/40/50	27.95	
CT-27A Cloning cable	10.95	
CT-30 Microphone Y adapter	10.95	
EDC-5B DC adapter w/noise filter	26.95	
EDC-6 DC adapter; plug & wire only	7.95	
FBA-15 AA battery holder	19.95	
FEP-10 Earphone	9.95	
FNB-40 650ma 6v battery D	48.95	
FNB-41 600ma 9.6v (5w) battery	58.95	
FNB-42 1100ma 9.6v (5w) battery	62.95	
FNB-V47 1100ma 7.2v battery w/belt clip	55.95	
PA-17 Battery cable extender	57.95	
FNB-49 600ma 6v battery D	38.00	9.95
FTT-10/A16 16-key pad/enc/30ch; 10/40 Δ	34.95	24.95
FTT-12 16-key keypad/dec/DVRS; FT-50R D	62.95	29.95
LCC-10C Leather case/belt clip; 50/FNB41/V47	31.95	
LCC-10S Leather case/swivel; 50/FNB41/V47	31.95	
LCC-11S Leather case/swivel; 50/FNB40 D	31.95	29.95
MH-30C2B Speaker/mic; use CT-30 also	45.95	
MH-34B4B Speaker/mic	30.95	
MH-37A4B Earpiece/microphone	30.95	
NC-50 1-hour dual slot charger	92.95	
CA-14 2 charging sleeves; NC-50	26.95	
RH-1 Black rubber case protector	7.95	
RH-1R Orange rubber case protector	7.95	
VC-23 VOX headset D	62.95	59.95
VC-25 VOX headset	62.95	
YHA-54 Replacement 2m/440 BNC duck	16.95	
FT-11R/HP 5w 2m HT/FNB-38/cgr/TTP D	323.00	199.95
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FT-51R/HP 5w 2m/440 HT/FNB-38/cgr/TTP D	639.00	379.95
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51R Clone/CT-35 Clone cable; FT-11/41/51R	9.95	
ADMS-1E Windows programming software	39.95	
CSC-61 Case; 11R/41R/FNB-33/38/FBA-14	16.95	
CSC-62 Soft case for FT-11R/41R/FNB-31	16.95	
CSC-66 Soft case; FT-51R/FNB-33/38/FBA-14	19.95	
CSC-67 Soft case for FT-51R/FNB-31	19.95	
EDC-12 DC adapter; FT-11R/41R/51R	38.95	
FBA-14 AA battery holder	19.95	
FNB-31 600ma 4.8v battery	47.95	
FNB-33 1200ma 4.8v battery	62.95	
FNB-38 600ma 9.6v (5w) battery	75.95	
FTS-26 CTCSS decoder	47.95	
MH-29A2B LCD display spkr/mic; 51R	106.95	
MH-30C2B Speaker/microphone	45.95	
MH-32A2B Compact lapel spkr/mic D	30.95	24.95
MH-34C2B Compact lapel speaker/mic	30.95	
MH-35A2B Spkr mic/clip/earphone jack	39.95	
MH-37B2B Earpiece/microphone	30.95	
NC-34B Wall charger for FNB-33	14.95	
NC-50 1-hour dual slot charger	92.95	
CA-10 2 charging sleeves; NC-50/11/41/51	14.95	
NC-55B Wall charger for FNB-31	14.95	
NC-65B/NC-38B Wall charger for FNB-38	14.95	
VC-22 Headset w/VOX	62.95	
YHA-54 Replacement 2m/440 BNC duck	16.95	
VX-1R 500mw 2m/440 submini HT/lith ion †	349.00	199.95
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CN-3 BNC to SMA adapter	8.95	
CSC-71 Soft case for VX-1R	19.95	
CT-44 2-pin spkr/mic adapter	12.95	
EDC-15 DC adapter	38.95	
FBA-20 Battery holder	22.95	
FEP-10 Earphone	9.95	

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MH-34B4B Speaker/mic	30.95	
MH-37A4B Earpiece/microphone	30.95	
NC-66B Extra 2 hour wall charger	18.95	
VC-25 VOX headset	62.95	
VX-5R 5w 6m/2m/440 FM HT/lith ion batt	429.00	359.95
ADMS-1E Windows programming software	39.95	
CD-15 Charger stand (use with NC-72B)	29.95	
CN-3 BNC to SMA adapter	8.95	
CSC-73 Soft case for VX-5R	19.95	
CT-27A Cloning cable	10.95	
CT-44 2-pin spkr/mic adapter	12.95	
EDC-5B DC adapter w/noise filter	26.95	
EDC-6 DC adapter; plug & wire only	7.95	
FBA-23 2 AA cell battery case	25.95	
FNB-58LI Extra 7.2v 1100ma lith ion batt	69.95	
MH-34B4B Speaker/mic	30.95	
MH-37A4B Earpiece/microphone	30.95	
NC-72B Extra wall charger	18.95	
SU-1 Altitude/barometric pressure sensor	35.95	
VC-25 VOX headset	62.95	

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G-450A 10 sq ft antenna rotor/5-wire	$289.00	259.95
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G-550 12 sq ft elevation rotor/8-wire	349.00	299.95
G-800S Med/hvy duty 450 degree 17sq ft/5-wire	389.00	339.95
G-800SDX Med/hvy duty 17sq ft/presets/5-wire	499.00	429.95
G-1000SDX HD 450 degree 23sq ft/presets/5-wire	599.00	519.95
G-2800SDX HD 450 degree 34sq ft/presets/8-wire	1329.00	1139.95
G-5500 11 sq ft azimuth/elevation rotor//2x8-wire	719.00	629.95
GA-2500 Tower absorber joint;450A/XL/800S/SDX	79.95	
GA-3000 Tower absorber joint;1000SDX/2800SDX	119.95	
GC-038 Mast clamp; 450/800/1000/5400B/5500	31.95	
GC-048 Mast clamp; G-2800SDX	47.95	
GL-33 Mast adjustment plate	14.95	
GS-050 50mm thrust bearing; mast 1¼-2"	31.95	
GS-065 65mm thrust bearing; mast 1½-2½"	47.95	
GS-23 Interface; G-800/1000/2700/2800SDX	356.00	299.95
GS-232 Interface for G-5400B/5500	562.00	469.95
Sep Kit Separation kit for G-5400B/5500	23.95	

See BELDEN for rotor cable

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VXA-100-6/41B Aviator Pro 5w air HT	$519.00	399.95
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VXF-10/Vertex Family radio svc handheld w/WX	159.00	79.95
CLIP-8 Belt clip for VXF-1 Δ	8.95	2.95
EDC-15 DC adapter	38.95	
FEP-10 Earphone	9.95	
FNB-53 Nicad battery pack	19.95	
MH-34B4B Speaker/mic	30.95	
MH-37A4B Earpiece/mic	30.95	
NC-66B Wall charger for FNB-53	18.95	

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52 20 47 10x25 black binoculars	529.95	479.95
52 30 09 8x30 black binoculars	499.95	449.95
52 40 06 7x42 rubber armored binoculars	1149.95	949.95
52 40 07 7x45 black forest binoculars	1399.95	1199.95
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ADI AR-146 50w 2m FM Xcvr w/TTP mic		169.95
ADI AR-446 35w 440 FM Xcvr w/TTP mic		229.95
AEA IDR-96 5w 441.05 data Xcv/9600		299.95

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ALI DJ-C4T* 440 300mw cc size HT/lith ion		69.95
*No internal spkr DJ-C1T/DJ-C4T - must use earphone		
ALI DJ-191TH 5w 2m FM HT/batt/cgr/TTP		*154.95
*Sale price w/instant coupon; coupon expires 12/31/99		
ALI EBP-31N 7.2v 1200ma nicad; DJ-G1T		59.95
ALI EBP-32N 12v 722ma nicad; DJ-G1T		69.95
ALI EDC-52 Quick charger; DJ-G1T		79.95
ALP DX-SWL-S 90-13m 40' SWL sloper		49.95
AME DL-1500F 1500w dummy load/fan		49.95
B&K 330 750A AC multi-function clamp mtr		49.95
B&K 541 Component comparator		249.95
B&K 830 Autoranging capacitance meter		199.95
B&K 1646 0-16V, 0-10A power supply		269.95
B&K 2831A Digital bench multimeter		189.95
BEN ST-3 Sgl lever kyr paddle, gold plate		169.95
BUT P-5 1:1 balun		49.95
CMT CA-350DB 10/6m 2.15/6.5db 22' 7" ant		229.95
CMT CA-HV 40/15/10/6/2m 5' 10" mob ant		129.95
CMT CF-413B 440/1.2 500/200w N/UHF/N leads		49.95
CMT CF-4130A 440/1.2 500/200w N, no leads		49.95
CMT CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads		69.95
CMT CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads		59.95
CMT CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads		54.95
CMT CH-701X 2m/440/900 2/3.4/5.5db 19" BNC		49.95
CMT CSW-20N 0-1300MHz N coax switch		49.95
COB 25LTD ST Sound Tracker AM Mobile CB		119.95
COB 25LTD WX AM Mobile CB w/WX		89.95
COB 25WX ST Sound Tracker AM Mobile CB w/WX		99.95
COB 146GTL SSB/AM Mobile CB		139.95
COB CP-912 900MHz dig sp spec cordless		99.95
COB FRS-200 Family radio service handheld		69.95
COB HH-35 AM portable CB		49.95
COB HH-36 ST Sound Tracker handheld CB		59.95
COB HH-70 AM remote CB		79.95
COU Procom 2w VHF FM hand-held/batt/cgr		99.95
CSY CS-700 Simplex interconnect		199.95
CUS 617-SK Harness/pwr divider; 2 6176Bs		49.95
CUS ARX-6 6m FM Ringo Ranger		179.95
CUS ARX-270N 2m/440 9/12 db fg type N ant		199.95
CUS ARX-270U 2m/440 9/12 db fg SO239 ant		199.95
CUS CG-144A 2m ¾" mt Gold coil/whip only		69.95
CUS PD-4N Power divider for 4 17B2s		69.95
DAV 7415 Wizard II-S weather station		129.95
DIA K-600P Tilt angle tnk mt w/cable, Yae N		59.95
GEN RS-402 5/20/200w 125-525 SWR/pwr		49.95
GRU Traveller II Port AM/FM/SW/LW Rcvr/clock		49.95
GRU Traveller III Digital AM/FM/SW/LW Rcvr		99.95
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HUS G6-450-4 6db 470-478 base ant		99.95
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HYG 184 14RMQ Roof kit-12/14AVQ,18AVT		29.95
HYG 189S GRK-88 Ground radial kit		59.95
HYG 190S RRK-88 Roof radial kit		69.95
HYG 191S 160MK-88 160m kit for 188S		129.95
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HYG 231S 70-31DX 430 31 el bm, 24' boom		139.95
HYG 373S Discoverer 7-3 3rd el; 372S; 35' bm		279.95
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HYG 2400-155 62400155 Boom mic/headset		59.95
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ICO BP-2 425ma 7.2v long life battery		49.95
ICO BP-3 250ma 8.4v battery		49.95
ICO BP-5 425ma 10.8v high power battery		79.95
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ICO BP-7 425ma 13.5v 5w battery		99.95
ICO BP-8 800ma 8.4v long life battery		89.95
ICO BP-82 7.2v 300ma battery		49.95
ICO BP-83 7.2v 600ma battery		69.95
ICO BP-84 7.2v 1000ma battery		89.95
ICO BP-131 900ma 7.2v batt/mic;W21		59.95
ICO BP-132 600ma 12v batt/mic; W21		79.95

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ICO BP-171 4.8v 700ma battery		49.95
ICO CR-64 High stab osc xtal; 728		99.95
ICO FL-32A 500 Hz CW filter; R-71A		99.95
ICO FL-63A 250 Hz CW filter; R-71A		89.95
ICO HM-55A Speaker/mic w/TTP		69.95
ICO IC-F10-1 2w 146-174MHz 24 ch HT		269.95
ICO IC-M45W White 25w VHF marine Xcvr		189.95
ICO IC-706 Mk II Mini Xcvr/SW Rcvr/6m/2m/DSP		1099.95
ICO OPC-439 23' separation kit; IC-2700H		49.95
ICO UI-8 FM unit; R-72A		49.95
ICO UT-67 Tone squelch unit		49.95
ICO UT-85 Tone squelch unit		49.95
ICO UT-89 Tone scan/decode unit; IC-2350H		89.95
INT dspGOLD Software for AEA DSP-2232		69.95
JPS ANC-4 Antenna noise canceller		189.95
JPS NIR-12 Dual DSP noise reduction/filt unit		349.95
JPS NRF-7 Noise reducer and filter unit		159.95
JSC JRR-520 5-wire rotor cable ...**500** ft. Roll		44.95
JSC JRR-520 5-wire rotor cable .**1000** ft. Roll		79.95
KAN Data Engine TNC w/no modems		169.95
KAN Data Engine w/DE-1200 modem		199.95
KAN K-1 1w 2m transmitter kit		69.95
KEN BC-15A Rapid cgr; PB-13/14/17/18		19.95
KEN BT-10 6 AA alk batt case; TH-235A		4.95
KEN DFK-3B 9' sep disp cable kit; TM-733A		29.95
KEN DFK-4B 13' rem cable kit; TM-733A		39.95
KEN DFK-7A Dlx 22' rem cbl kit; 255A/455A		69.95
KEN DFK-7B Dlx 22' rem cbl kit; TM-733A		59.95
KEN DTU-2 Digital paging unit; TM-541A		19.95
KEN MA-700 3db 2m/5.5db 440 ant w/dplxr		99.95
KEN MB-13 Quick release mobile mt; TS-50S		29.95
KEN MB-14 Quick release mob mt; TM-742AD		29.95
KEN ME-1 Memory expansion; TH-28A		9.95
KEN PB-36 7.2v 950ma nicad; TH-235A		9.95
KEN PB-37 12v 950ma (5w) nicad; TH-235A		19.95
KEN PG-3E Cig cord w/filter for DC-1		19.95
KEN SC-33 Soft case; TH-28A/48A/PB-13/BT-8		9.95
KEN SC-34 Soft case; TH-28A/48A/PB-17/18		19.95
KEN SC-35 Regular soft case; TH-78A		99¢
KEN SC-36 Large soft case; TH-78A		99¢
KEN SC-41 Soft case; TH-79A(D) w/PB-32		9.95
KEN SC-43 Soft case; TH-79A(D)/PB-33/34		9.95
KEN TH-42AT 2.5w 440 FM HT/batt/cgr/TTP		269.95
KEN UT-10 10w 1.2 GHz module; TS-790A		549.95
KEN VP-1 Hvy duty chrome spg, bumper mt		19.95
KEN YG-455C-1 500 Hz CW filt; TS-450/690		149.95
KEN YG-455CN-1 250 Hz CW filter; TS-950SDX		99.95
KEN YK-88CN 270Hz CW filter; R-5000		69.95
KEN YK-88S-1 2.4 KHz SSB filt; TS-450/690		69.95
KEN YK-455C-1 500 Hz CW filter; TS-140S		99.95
KLM 2M-14CM 2m circ 14el beam, no switcher		129.95
KLM 2M-16LBXM 2m 16el beam, 28'bm, 14.5db		169.95
KLM 432-30LBX 432 30el beam, 22'bm, 17.3db		149.95
KLM 440-2N 432 MHz - for 2 ants, w/type N		49.95
LAR FB1-136 Base station 136-230MHz ant		69.95
MAG GPS-2000XL 12 ch GPS receiver		149.95
MAG GPS Tracker 12 ch GPS w/wrist strap		229.95
MAG Meridian XL GPS/plot/detach ant		239.95
MAH MH-101-I3 Cgr; Ico 171/172/173/180		49.95
MAH MH-101-Y1 Cgr; Yae 10/11/12/17/25/27		49.95
MAH MH-101-Y2 Cgr; Yae FNB31/38/Mah 38		49.95
MAL ARD-12 2m/440 4.3/6.8db 48.8" mobile		49.95
MAL ARD-12B Blk 2m/440 4.3/6.8db 48.8" mob		59.95
MAL ARS-146 2m 4.1db 56" mobile ant		49.95
MAL EX-111B Blk 2m/440 3.6/6db 44" mobile		49.95
MAX 27-KC Docking handheld/AM Mobile CB		59.95
MAX 27-MCB Compact handheld AM Mobile CB		49.95
MAX FRS-114 FRS handheld		49.95
MFJ 47C Mailbox 512K mem; 1270/1274		79.95
MFJ 119 Giant 24/12 hour LCD/in temp clock		39.95
MFJ 346 600 MHz LCD frequency counter		89.95
MFJ 411 Personal Morse Code Tutor		49.95
MFJ 432 Voice Memory Keyer		109.95

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MFJ 1680Y Windows soft package; Yaesu		49.95
MFJ 1782 Super Hi-Q 10-30 loop/basic control		259.95
MFJ 8621X1 APRS ready VHF data radio/145.79		79.95
MGE HFS-1 10w mobile spkr, 3.5mm plug		19.95
MIR A-1015R 6m FM 2/80w repeater amp		449.95
MOT 50995 Camouflage TalkAbout Plus FRS		79.95
NCG BB-516 Motorcycle intercom set		49.95
OAK PS-612M HD DC pwr strip w/breakers		59.95
OPT SSB-220A SSB/gen purp 3GHz counter		169.95
PAL 5-15 MHz plug-in loop (HF-1)		89.95
PAL 1.6-5 MHz plug-in loop (160m, 80m)		89.95
PAL .55-1.6 MHz plug-in loop (AM broadcast)		89.95
PAL 150-550 KHz plug-in loop (LF, 1750m)		89.95
PAL 40-150 KHz plug-in loop (WWVB, Loran)		79.95
PAL MSB-3 Magnetic switch rcv balun		59.95
PAL P-508 .2-30MHz 12v active Rcvr preamp		79.95
PAT PC-16000 HF Xcv/dig modem/keyboard		999.95
PEC Spectrum FCC database CDROM		9.95
RCO 700 Automatic morse code identifier		59.95
RFC 2-23 2m FM/SSB 2/30w amp/preamp		69.95
RFC 2/70 2m/440FM 3/30//5/20w HT amp		149.95
RFC 144 2m FM mini-amp 2/30w amp		59.95
RFC 144P 2m FM mini-amp 2/30w amp/pre		99.95
RFC UHF-50 440 3/50w FM HT N amp		169.95
RFC VHF1-60 2m 1/60w FM HT amp		129.95
RFL HL-35NP 2m .5-5/20-35w amplifier		29.95
RFL HL-35V 2m .5-5/20-35w amp/pre		59.95
RFL HL-36U 440 .5-12/30w amplifier		129.95
RMS PA-546 2m 5/45w amplifier		39.95
RMS W-450 140-170/430-470 150w meter		29.95
ROH HDBX-40/BXB-7 40' twr/base stubs, 18 sq ft T		499.95
SHA 5302 8' VHF marine/Loran combo ant		49.95
SON ICF-SW10 AM/FM/SW compact receiver		49.95
SON ICF-SW12 AM/FM/SW travel Rcvr/world clock		99.95
SON ICF-SW1000TS AM/FM/SW Rcvr/tape/ANLP1		549.95
SON ICF-SW7600GS AM/FM/SW port Rcvr/ANLP1		249.95
STA C-108A 200mw 2m FM HT		149.95
STA C-178A 2m/440 FM mini HT/TTP		299.95
STA C-558A 2m/440 HT/batt/cgr/TT/ctcss		399.95
STR ATH-15 1-1500MHz bar graph freq ctr		189.95
STR CAM-PHA-AES B&W pinhole TV cam/mic/ps		99.95
UNI BC-147XLT-1 16 ch prog scan/instant WX		99.95
UNI BC-178XLT 100ch prog scan/air/WX alert		139.95
UNI BC-235XLT 300ch prog pock/trunk/xtra bat		199.95
UNI BC-860XLT 100 ch prog scan/air/800		179.95
UNI BCT-10 Pre-prog hiway info sys scan		99.95
UNI Grant-XL SSB/AM Mobile CB		159.95
UNI PC-76XLW AM Mobile CB w/WX alert		119.95
UNI PRO-340XL 40 ch port CB/rubber ant		49.95
UNI PRO-350XL 40 ch handheld CB		89.95
X10 CK-11A X10 ActiveHome automation/win soft		69.95
X10 DS-7000 7-piece home security system		159.95
X10 PK-9 REX-10 barking dog alarm		49.95
YAE ATU-2 Internal ant tuner; FT-900		219.95
YAE CA-8 2 chg sleeves; NC-50/FT-416/530		4.95
YAE CSC-24S Case; 23R/33R/73R w/FNB-12S		99¢
YAE CSC-35 Soft case; 411E/811/911/FNB17		99¢
YAE CSC-50 Vinyl case; 415/416/FNB25		2.95
YAE CT-20 Mic cable for use with MD-1C8		9.95
YAE DVS-3 Voice unit; 2200/5200/6200/7200		69.95
YAE FEX-736-1.2 1.2 GHz module; FT-736R		539.95
YAE FEX-736-50 6m module; FT-736R		279.95
YAE FEX-736-220 220MHz module; FT-736R		309.95
YAE FNB-49 600ma 6v battery		9.95
YAE FP-712/Vertex 10A switch ps, 12A surge		99.95
YAE FRC-4 DTMF pager unit; FT-5200/6200		9.95
YAE FRC-6 DTMF pager unit; FT-2500/7400		9.95
YAE FT-10/40B-A16S 2.5w 2m/16ky/99ch/DVR		259.95
YAE FT-11R/HP 5w 2m HT/FNB-38/cgr/TTP		199.95
YAE FT-51R/HP 5w 2m/440 HT/FNB-38/cgr/TTP		379.95
YAE FT-40/41B-A16D 5w 440 HT/16ky/99ch		249.95
YAE FT-40/41B-A16S 5w 440/16ky/99ch/DVR		269.95
YAE FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP		559.95

CLOSE-OUTS - continued

	Reg	Sale
YAE FT-1000MP/DC HF Xcvr/EDSP/tuner		2699.95
YAE FTS-6 Encoder/decoder; 09-series		9.95
YAE FTT-4 DTMF (TTP) unit; FT-23R/33R/73R		19.95
YAE FTT-12 16-key keypad/dec/DVRS; FT-50R		29.95
YAE FX-1 Xcvr-FAX interface/controller		19.95
YAE G-500A 12 sq ft elevation rotor/8-wire		259.95
YAE MH-15D8 Autodial TTP microphone		69.95
YAE MH-39A6J Extra reg mic; FT-8500		94.95
YAE MMB-46 Mobile hanger for FT-470		4.95
YAE MW-2 Wireless remote control mic		49.95
YAE TV-736 1.2 GHz ATV converter; FT-736R		189.95
YAE VC-23 VOX headset		59.95
YAE XF-110C 455 KHz 500 Hz CW filter		129.95
YAE YSK-900 20' rem mtg kit/tnk mtg bkt; FT900		49.95
ZEN A-8477 75 ohm high-pass filter		9.95

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Location as of 10/15/99: (m) Milwaukee; (c) Cleveland; (f) Orlando; (v) Las Vegas

USED EQUIPMENT

ALINCO
DR1200T/MIC 2M XCVR ... 129.95 f
DR605TQ 2M/440 XCVR ... 289.95 f
DX77T HF XCVR ... 659.95 f

AMERITRON
AL572 HF AMPLIFIER ... 999.95 f
AL800H 1.5K HF AMP ... 1,599.95 m
ATR15 ANT TUNER ... 269.95 m

AOR
AR16B RCVR ... 169.95 m
AR8200B .5-2040 MHZ RCVR ... 439.95 f

ASTRON
RS35M 25A POWER SUPPLY ... 129.95 c

AZDEN
AZ61 6M HT ... 299.95 c

DRAKE
R8 RCVR ... 679.95 m
R8 RCVR w/VHF CONV ... 779.95 mc
SW1 SWL RCVR ... 199.95 f
SW2 RCVR w/REMOTE ... 369.95 m

ICOM
AH3 AUTO ANT TUNER ... 299.95 f
AT100 ANTENNA TUNER ... 289.95 m
IC P4AT 440 HT ... 124.95 c
IC229H 2M XCVR/TTP MIC ... 149.95 m
IC2350H 2M/440 XCVR ... 319.95 c
IC271H 2M XCVR/PS35 ... 769.95 cf
IC275A XCVR/AC SUPPLY ... 929.95 c
IC275H 100W 2M XCVR ... 999.95 mcf
IC471A 430-450 MULTI ... 599.95 m
IC471H 70CM XCVR/PS35 ... 899.95 mc
IC475A 70CM XCVR/UT34 ... 919.95 m
IC706 HF/6M/2M XCVR ... 599.95 f
IC707 HF XCVR ... 599.95 mc
IC725 HF XCVR/FL100 ... 559.95 c
IIC728 HF XCVR ... 699.95 cf
IC728 HF XCVR/FL100 ... 719.95 mc
IC728 HF XCVR/UI7(FM) ... 719.95 m
IC728 HF XCVR/UI7/FL100 ... 729.95 m
IC729 HF XCVR/FM ... 869.95 m
IC729 HF/FM/TONE ... 929.95 m
IC735 HF XCVR ... 659.95 mcf
IC735 HF XCVR/EX243/FL32 ... 699.95 c
IC736 HF XCVR/6M ... 1,249.95 mcf
IC736 HF/SM8 DESK MIC ... 1,349.95 m
IC736 HF/6M XCVR/UT30 ... 1,269.95 f
IC737 HF XCVR ... 799.95 mf
IC737A HF XCVR ... 899.95 c
IC737A HF XCVR FL52A/FL100 ... 949.95 m
IC738 HF XCVR ... 999.95 mc
IC738 HF XCVR/UT30 ... 1,019.95 m
IC738 HF/FL52A/FL100 ... 1,039.95 m
IC738 HF/FL53A/FL101 ... 1,039.95 m
IC751 HF XCVR ... 649.95 f
IC751A HF XCVR/UX14 ... 769.95 c
IC761 HF XCVR/FL-53A/FL-101 ... 939.95 c
IC775DSP HF DSP XCVR ... 2,899.95 m
IC821H 2M/440 XCVR/ALL MODE ... 979.95 c
PS15 POWER SUPPLY ... 119.95 mc
PS85 COMPACT POWER SUPPLY ... 199.95 m
R1-15 RCVR/BLOCKED ... 329.95 cf
R10-05 COMM RCVR HT ... 239.95 mf
R7000 25-2000MHZ RCVR ... 999.95 mf
R71A PBT SWL RCVR ... 599.95 mcf
R71A SWL/4 FILTER/EX257 ... 599.95 m
R7100 COMM RCVR ... 1.199.95 m
R7100 RCVR/SVC MAN ... 1,239.95 m
TVR7100 TV/FM ADAPTER ... 159.95 m

KENWOOD
AT230 ANT TUNER ... 149.95 m
AT250 AUTO ANT TUNER ... 279.95 f
PS53 POWER SUPPLY ... 179.95 c
SM220 MONITOR ... 229.95 f
TM241A 50W 2M MOBILE ... 129.95 c
TM401B 70CM XCVR ... 249.95 f
TM733A 2M/440 FM XCVR ... 349.95 f
TR7950 2M FM XCVR ... 149.95 f
TR9000 2M FM/SSB XCVR ... 289.95 m
TS120S HF XCVR ... 329.95 c
TS130S HF XCVR ... 419.95 m
TS140S HF XCVR ... 649.95 cf
TS140S HF XVCR/YK455C ... 689.95 f
TS430S HF XCVR/FM/YK88C ... 609.95 m
TS440S/AT HF XCVR ... 799.95 m
TS450S HF XCVR ... 799.95 cf
TS450S/AT HF XCVR ... 839.95 cf
TS530S HF XCVR/CW ... 539.95 m
TS570D HF XCVR ... 879.95 f
TS570D HF/YK88SN1 ... 899.95 m
TS570S HF/6M XCVR ... 1,099.95 mcf
TS60S 6M XCVR ... 799.95 cf
TS680S HF XCVR/TSU8 ... 819.95 m
TS680S HF XCVR/6M ... 789.95 mcf
TS680S HF/6M CW/ROUGH ... 729.95 m
TS680S XCVR/CW FLT ... 819.95 mc
TS690S HF/C/SN/TU8 XCVR ... 1,299.95 f
TS690S HF/6M W/AT XCVR ... 1,199.95 mcf
TS690S HF/6M W/AT/ + ... 1,249.95 m
TS690S HF/6M XCVR ... 999.95 c
TS690S HF/6M XCVR/YG455C1 ... 1,039.95 f
TS690S HF/6M/AT/YK88C1 ... 1,219.95 m
TS690S/AT HF/CW FILTER ... 1,219.95 m
TS690S/AT HF/6M XCVR/VS2 ... 1,219.95 f
TS690S/AT XCVR/2 FILTERS+ ... 1,319.95 m
TS711A 2M SSB/FM ... 709.95 f
TS811A UHF XCVR ... 839.95 mc
TTS820 HF/DC UNIT ... 419.95 m
TS830S HF XCVR ... 599.95 m
TS830S XCVR /SVC MAN ... 619.95 m
TS850S HF XCVR/DRU2 ... 1,139.95 m
TS850S/AT HF XCVR ... 1,179.95 mf
TS850S/AT HF XCVR/ VS2 ... 1,209.95 c
TS850S/AT HF XCVR/ 2 FILT. 1 ... 1,259.95 f
TS850S/AT HF XCVR/DRU2 ... 1,229.95 c
TS850S/AT HF XCVR/YG455C1 ... 1,259.95 cf
TS850S/AT HF XCVR/3 FILTERS ... 1,359.95 m
TS870S HF DSP XCVR ... 1,679.95 f
TS940S HF XCVR ... 999.95 c
TS940S/AT HF XCVR ... 1,099.95 cf
TS940S/AT HF XCVR IF10B ... 1,119.95 c
TS940S/AT YG455C1/88C1 ... 1,199.95 f
TW4100A 2M/440 MOBILE ... 289.95 m
TW4100A 2M/440 XCVR/TU7 ... 299.95 c

MFJ
1020B ACTIVE ANTENNA ... 49.95 f
1040B PRESELECTOR ... 69.95 c
1214PC MULTIMODE INTER ... 99.95 m
407B ELECRONIC KEYER ... 55.95 c
4112 POWER PACK ... 49.95 f
486/77 MEMORY KEYER/REMOTE ... 69.95 m
9020 20M CW XCVR/412/726 ... 191.95 c
9030 30M CW XCVR ... 119.95 c
9040 40M CW XCVR/412/726 ... 191.95 c
9120B 20M CW PKG ... 259.95 c
931 ARTIFICIAL GROUND ... 49.95 cf
9402X 2M XCVR ... 189.95 m

MIRAGE
B23 2M AMP ... 89.95 f
B23G 2/30W 2M AMP ... 89.95 f
B2516G 25/160W 2 MTR AMP ... 215.95 f
KP1/2M RX PREAMP ... 109.95 f

PATCOM
PC16000HF XCVR/DIG MODEM ... 799.95 f

SGC
PS30 30/40 UNREG PS ... 319.95 c

STANDARD
C1208DA 50W 2M FM XCVR ... 359.95 c
C158A 2M HANDHELD ... 149.95 f
C168A 2M HT ... 179.95 m
C178A 2M/440 HT ... 229.95 c
C178A 2M/440 HT/CMU161 ... 249.95 c

VECTRONICS
VC300D 300W ANTENNA TUNER ... 139.95 f

YAESU
FC20 ANTENNA TUNER ... 189.95 c
FC757AT AUTOMATIC TUNER ... 309.95 cf
FL7000 HF AMP/LATE ... 1,679.95 f
FRG8800 SWL RCVR ... 499.95 m
FT100 HF XCVR/CW FILT ... 1,189.95 m
FT1000 HF XCVR ... 2,379.95 m
FT1000D HD XCVR/XF-F ... 2,899.95 m
FT102 HF XCVR ... 499.95 c
FT290RMKII 2M XCVR/FTS7 ... 449.95 c
FT3000M 70W 2M FM XCVR ... 314.95 m
FT4700RH 2M/440 XCVR ... 369.95 mc
FT5200 2M/440 XCVR/YSK1L ... 419.95 m
FT712RH 35W 440 FM ... 269.95 f
FT730R UHF XCVR ... 249.95 m
FT747GX HF XCVR ... 549.95 c
FT757GX HF XCVR ... 669.95 f
FT757GX HF/SERV MAN ... 679.95 m
FT757GX MKII HF XCVR ... 719.95 m
FT767GX HF XCVR/2M ... 1,169.95 mf
FT767GX HF XCVR/2M/FTS8 ... 1,199.95 m
FT767GX HF XCVR/2M/440 ... 1,299.95 m
FT767GX HF XCVR/6M ... 1,199.95 c
FT790RII XCVR ... 499.95 m
FT790RII XCVR/FTS7 ... 529.95 m
FT8100R VHF 2M/430 XCVR ... 374.95 mc
FT840 HF XCVR/FM UNIT ... 639.95 m
FT920 HF/6M XCVR/FM1+ ... 1,229.00 f

DEMOS / RETURNS

ADI
AR146 2M XCVR ... 159.95 mcv
AT200 2W 2M HT ... 119.95 f
AT201HP 2M HT ... 134.95 cf
AT400HP 440 HT ... 179.95 fv
PR222 220 HT ... 197.95 c
PR52 6M HT ... 197.95 c

ALINCO
DJC1T 2M 300MW ... 62.95 v
DJC5T 2M/440 HT ... 149.95 m
DJG5TH 2M/440 HT ... 259.95 mcf
DJS11T 2M HT ... 71.95 c
DJS41T 440 HT ... 74.95 m
DJS46T FRS HT ... 99.95 m
DJX10T RCVR ... 319.95 mc
DJ180TH 2M HT ... 143.95 v
DJ191TH 2M HT ... 159.95 m
DJ280TH 5W 220 HT ... 170.95 v
DRM06TH 6M XCVR ... 239.95 m
DR610TQ 2M/440 XCVR ... 429.95 m
DX70T COMPACT HF/6M XCVR ... 674.95 c
EDX2 AUTO ANT TUNER ... 287.95 f

AMERITRON
ALS600 AMPLIFIER ... 1,014.95 m
AWM30 PEAK SWR/WATTMET ... 125.95 c
QSK5 T/R SWITCH ... 299.95 m

AOR
AR16B RCVR ... 214.95 m
SDU5500 SPEC DISP ... 899.95 m

ASTRON
RS35A/220V POWER SUPPLY ... 149.95 m
RS35M 25A PS W/METERS ... 152.95 v
RS70M PS W/METERS ... 260.95 v
VS50M POWER SUPPLY ... 229.95 m

AZDEN
PCS7300H 440 XCVR ... 179.95 m

B&W
AC1.830 ANTENNA ... 152.95 v
AS40 40-10 TRAP DIPOLE ... 139.95 cv
FL10/1500 LOWPASS FILTER ... 69.95 m

CES
SSI68 PATCH ... 199.95 m
CES 4700VP PHONE PATCH ... 149.95 mcf

COURIER
MU510 BUSINESS HT ... 269.95 m
M54 5W W/151.625 ... 179.95 f
U22/A UHF HT ... 119.95 mf
U22/B UHF HT ... 119.95 m

CUSHCRAFT
R80 80M KIT/R7000 ... 125.95 mv

DIAMOND
K400CNMO ANT MT ... 59.95 m
K600M MOUNT ... 51.95 c
K601M HIDE-TRUNK ... 62.95 cv
K601NMO MOUNT ... 59.95 m
SX100 HF-6M MTR ... 134.95 mcf

DIGIMAX
D500 COUNTER ... 109.95 f
DIGIMAX D510 COUNTER ... 119.95 f

DRAKE
R8A SWL RCVR ... 899.95 mv
DRAKE R8B SWL RCVR ... 1,079.95 m

GARMIN
GPS38 GPS RCVR ... 149.95 f

GRUNDIG
YACHTBOY 230 SWL RCVR ... 71.95 m
YACHTBOY 305 SWL RCVR ... 99.95 f
YB400P SWL RCVR ... 179.95 m

HAL
DXP38 TNC ... 349.95 m

HEIL
HMP INLINE MIC PREAMP ... 49.95 v
HMPM PREAMP ... 49.95 m
PROMICRO5 HDST ... 89.95 fv

HUSTLER
G7-220 ANTENNA ... 134.95 m

ICOM
AT180 TUNER ... 449.95 v
BC79 CHARGER ... 119.95 c
BFL96 SSB FILTER ... 149.95 m
HM90A WIRELESS MIC ... 119.95 m
ICT2H 2M 6W HT ... 152.95 mfv
ICT22A 2M HT ... 214.95 m
ICT22A 2M HT/SPKR-MIC/CHGR ... 290.95 v
ICT7H 2M/440 HT ... 215.95 c
ICT8A LO POWER (2W) ... 269.95 v
ICT8AHP 2M/440 HT ... 314.95 mc
IC2GXAT 2M 3W HT ... 189.95 cfv
IC706MKIIG HF/6M/2M/440 ... 1,259.95 mf
IC707 HF XCVR ... 584.95 mc
IC756 HF XCVR ... 1,799.95 m
IC775DSP HF XCVR ... 3,239.95 f
M10A MARINE HT ... 159.95 m
M2 VHF MARINE HT ... 149.95 mc
M3A VHF MARINE HT ... 169.95 m
R1-15 BLOCKED ... 348.95 mf
R10-05 BLOCKED ... 319.95 mcf
R71A SWL RCVR ... 999.95 cv
SM6 ELECTRET DESK MIC ... 107.95 v
SP20 SPEAKER ... 224.95 c

JPS
NF60 DSP/NOTCH FILT ... 99.95 v
NIR-10 FILTER ... 179.95 m
NIR 412/SDK DSP FILTER/SOFTWAR 349.95 m

KANTRONICS
DATAENGINE TNC ... 206.95 c

KENWOOD
IF10D INTERFACE ... 80.95 v
KSC14 CHRGR ... 78.95 c
MC44DM TTP MIC ... 69.95 m
MC60A MIC ... 134.95 m
MC90 MIC ... 214.95 c
PB34 5W BATT ... 79.95 mf
PS40 POWER SUPPLY ... 179.95 mc
TS50S HF XCVR ... 699.95 m
TS570S(G) HF/6M XCVR ... 1,259.95 cf

MAGELLAN
GPS2000 GPS RCVR ... 129.95 m
MAGELLAN 0069038000 PC KIT ... 89.95 m

MFJ
1040B RCVR PRESELECTOR ... 89.95 v
1224 INTERFACE ... 89.95 m
1270CQ TNC ... 199.95 m
1278B/DSP TNC ... 314.95 m
1796 40-2M VERT ANT ... 170.95 v
201 DIP METER ... 99.95 m
224 2M FM SIG ANALYZER ... 134.95 v
346 FREQ COUNTER ... 89.95 c
4035MV ... 125.95 c
422C PADDLE/KEYER ... 116.95 c
781 DSP FILTER ... 99.95 m
9440X 40M XCVR ... 206.95 mc
9475X 75M XCVR/NO MANUAL ... 189.95 m
962D TUNER ... 224.95 m
969 TUNER ... 161.95 mv
4035MV POWER SUPPLY ... 125.95 c

MIRAGE
BD35 2M/440 AMP ... 134.95 m
MIRAGE B1016G 2M AMP ... 289.95 f
MIRAGE B215G 150W 2M ... 299.95 mf
MIRAGE B23G 2M 2/30W AMP ... 119.95 fv
MIRAGE B310G AMPLIFIER ... 159.95 m
MIRAGE KP1/10M PREAMP ... 114.95 m
MIRAGE KP1/2M PREAMP ... 109.95 m
MIRAGE KP2/10M PREAMP ... 159.95 m
MIRAGE KP2/2M MAST P/AMP ... 149.95 mv

PACCOM
PICO128K ... 134.95 m

PATCOMM
PC16000 HF XCVR ... 899.95 f

RF APPLICATIONS
P2000A SWR METER ... 269.95 mc
RFC VHF160 2M 1/60W ... 169.95 mf
RFC 144P AMPLIFIER ... 104.95 m
RFC 4-110 UHF AMP 100W ... 269.95 f

SANGEAN
ATS909 SWL RCVR ... 251.95 c

SGC
0401 SG-2000 HF XCVR ... 1,439.95 v
0410 SG-2000 XCVR/DSP/PT ... 1,664.95 v
5232 HANDSET/SG2000 ... 129.95 m
7007 POWER CLEAR DSP ... 319.95 mv

SONY
ICFSC1PC SCANNER ... 314.95 c
ICFSW33 SWL RCVR ... 134.95 m
ICFSW7600G SW RCVR ... 169.95 m
ICFSW7600GS SW RCVR ... 224.95 v
ICFSW77 SWL RCVR ... 419.95 cv
ICF2010 SWL RCVR ... 323.95 c
ICFSW77 SWL RCVR ... 422.95 c

STANDARD
CCR708A RCVR ... 629.95 m
C108A 2M HT ... 149.95 mc
C168A 2M HT ... 249.95 mc
C178A 2M/440 HT ... 314.95 m
C188A 2M HT ... 229.95 f
C508A 2M/440 HT ... 229.95 mf
C558A 2M/440 HT ... 449.95 mfv
C5718DA 2M/440 ... 599.95 mf

TIMEWAVE
DSP59PLUS DSP FILTER ... 239.95 f
DSP599ZX ... 349.95 f

UNIDEN
BCT10 SCANNER ... 129.95 f
BCT12 SCANNER ... 161.95 c
BC120XLT SCANNER ... 134.95 c
BC178XLT SCANNER ... 124.95 m
BC220XLT SCANNNER ... 179.95 cf
BC235XLT SCANNER ... 179.95 f
BC245XLT SCANNER ... 199.95 m
BC3000XLT 400CH SCANNER ... 359.95 c
BC700A SCANNER ... 152.95 mv
BC80XLT SCANNER ... 134.95 m

VECTRONICS
VC300DLP ANT TUNER ... 134.95 v

VIBROPLEX
100 ORIG PRESENTATION BUG ... 239.95 m

YAESU
ATAS100 HF-440 ANT ... 289.95 m
DVS2 DIG REC UNIT ... 199.95 m
FC20 ANT TUNER ... 239.95 m
FC800 EXT LONG WIRE AUTO T ... 395.95 v
FRG100B 1.8-30 MHZ RCVR ... 557.95 mv
FT10/41BA16S 2M HT ... 242.95 cf
FT23R/HP HT ... 179.95 m
FT3000M @M VXCR ... 359.95 c
FT33R 220 HT ... 269.95 m
FT40/41BA16D 440 HT ... 259.95 f
FT411E 2M HT/2 WATT ... 224.95 m
FT50RD/41B DUAL BAND HT ... 259.95 mcf
FT51R/HP 2M/440 HT ... 339.95 m
FT8100R VHF/UHF MOBILE ... 413.95 f
FT847 HF/6M/2M/430 XCVR ... 1,649.95 f
FT920 TRANSCEIVER ... 1,349.95 f
G1000SDX ROTOR ... 467.95 f
G2800SDX HD ROTOR ... 1,025.95 f
G450A LIGHT DUTY ROTOR ... 233.95 c
G500A ROTOR ... 249.95 m
G800S ROTOR ... 305.95 f
MD100A8X DESK MIC ... 116.95 c
SP8 SPEAKER ... 143.95 v
VR500 RECEIVER ... 319.95 c
VXA1006/41B AIR HT ... 359.95 m
VXF1 FRS HT ... 89.95 mv
VXF10 FSR HT ... 80.95 mc
VXR5000VADC 2M REPEATER ... 1,099.95 fv
VX5R 6M/2M/440 HT ... 324.95 mcf
XF10.9M20201 CW FILT ... 109.95 f
YF112C CW FILTER ... 107.95 v

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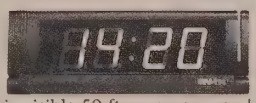
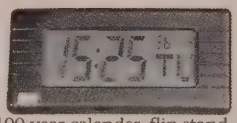
MFJ MFJ ENTERPRISES, INC

105C 24 Hour Quartz Wall Clock Black, 10" dia. face, sweep second hand. Uses one "AA" battery **$19.95**

112 Dx'ers World Map Clock and Calendar Pushbutton selection to highlight and show the Month, Day and 12/24 hour local time in 25 world cities. Large 1/2" LCD readout, alarm function. Tilt bracket, lithium battery backup. 5¼"w x 3¼"h x ⅝"d..... **$24.95**



114B Giant LED 24/12 hour clock Has four HUGE 2.3" high digits. The 12 or 24-hour display format is visible 50 ft. away or more! Operates from 110VAC with battery back-up feature. 6½"h x13"w x 1"d **$59.95**



118 Jumbo LCD™ 24/12-hour clock 1.25"h – high contrast LCD digits. Shows year, month, date and day in four different languages. 100 year calender, flip stand. Uses one "AAA" battery. 5¾"h x 3¾"w x ½"d **$24.95**

Small 24-hour Clocks: A **Dual Clock** with separate UTC and local time displays, and a **Single Clock** with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.

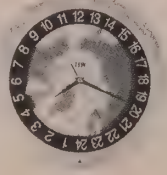
107B Single Clock, 2¼"w x 1"h x 2"d **$9.95**
108B Dual Clock, 4½"w x 1"h x 2"d..... **$19.95**

116 24/12 Hour LED Clock Switchable 24/12 hour display. Large, red 5/8" LED digits. 9 minute ID timer, loud alarm. Operates from 110VAC with battery back-up. Compact, 4½"w x 2"h x 4"d... **$14.95**

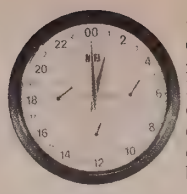
152 ThermometerClock™ Shows outdoor/indoor temp. and time. Huge LCD multiple display shows 12/24 hour time & Celsius/Fahrenheit. Auto daily update of min./max. temp. readings & memory function that recalls readings during a selectable period. Wall mount or desktop display. Incl. outdoor sensor, 10' of wire, "AA" batteries. 5"h x 2⅝"w x ¾"d"..... **$24.95**

119B GIANT display™ 12/24 Hr Calendar/Clock Size is 8½ x 9" – easily visible from 15 to 20 feet. Shows 12/24 hour time, digital calendar (year, month, date, day), and Celsius or Fahrenheit temperature. While and silver speckled – attractive for shack, office, police, fire, etc. "AAA" batt. incl..... **$49.95**

120 Monster Display ATOMIC Clock Self-calibrated from signals transmitted from the U.S. Atomic Clock in Fort. Collins, CO Shows 24/12 hour time, indoor temp. and relative humidity. Size: 8"h x 10"w x ¾"d (displays 6½"w x 2"h) – visible 20' away. Wall or desktop **$69.95**



115 WORLD Map 24 hour Quartz Wall Clock Set to GMT and know what time it is in designated areas of the world any time of day. Premier cities outline trim of 12" dia. Operates on single "AA" batt. (not incl.) .. **$24.95**



125 DXer's Dream 24 hour Quartz Wall Clock 12" dia. face shows highly visible, 24 hour format w/smaller day, date & 12 hour indicators. All dials set independently to handle special formats. Single "AA" battery (not included).... **$29.95**

126 12 Hour Quartz Wall Clock A beautiful Quartz accurate wall clock with a clear, clean and highly visible 12 inch diameter face that's easily seen from 15-20 feet away. Features 12 hour digits on a clean, white face, with a 24 hour trimline reversed in a handsome green and including red stop points and seconds digits. Operates for long periods on a single "AA" battery (not included) **$24.95**

BMI

Benjamin Michael Industries

972A (left) Battery operated 12-hour time quartz controlled clock with sweep-second hand. Huge 12" dial allows excellent visability in large rooms. Black textured case and clear glass crystal. Uses one "AA" battery. 14" diameter x 1¾" deep **$28.95**
973A (right) as above, but 24-hour version... **$49.95**

972AD 14" diameter, 12 and 24 hour format wall clock, sweep-second hand. Uses one "AA" battery **$32.95**

AMECO

TPA Tunable Preamp and Active Antenna Covers the 2-30MHz range in 5 bands. Use it w/outside antenna as tunable preamp with better than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30 inch collapsible whip. Requires 9V batt. or 110V AC from opt. P-9T AC adapter. 2½ "h x 8"w x 6½ "d..... **$76.95**

Palomar Engineers

VLF CONVERTERS

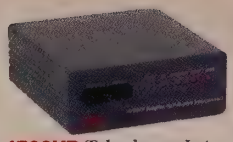
Receives/converts 10kHz to 500kHz Very Low Frequency band to 80m. 2 models tune this low range on general coverage receiver or Ham band transceiver. Uses 9V battery. 2"h x 4¼"w x 5"d.

VLF-A Use with Ham Band transceiver **$89.95**
VLF-S Use with General Coverage receiver.... **$89.95**

ANTENNA SUPERMARKET

EAVESDROPPER

Shortwave Antenna Center-fed dipole w/8-trap config. Provides reception of shortwave bands from 11-90 meters. Incl. Zap-Trapper® gas-tube lightning arrestor & 50' support rope. Overall length: 42'. Fully assembled. When ordering, specify **100' of 72Ω twin lead**, or **weatherproofed coaxial center connector** (coax not incl.)..... **$79.95**



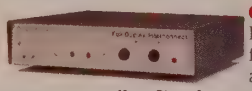
CES WIRELESS TECHNOLOGIES

4700VP Telephone Interconnect Versatile simplex or half duplex patch • True DTMF regen. • 25 speed dial locations • Full remote "over-air" programming • VERATEC smart sampling VOX enhanced protocol or simple VOX control • Auto redial • Comprehensive toll restrict w/override code • Call limit timer • Local program. • Auto setup • CW-ID • User program. ID code • Time-out timer/beeps • Reverse patch ring • Repeat audio • Busy channel inhibit • CTCSS logic input • Tone dialing/multi-country pulse • 1.5" x 4" x 4" ..... **SPECIAL $169.95**

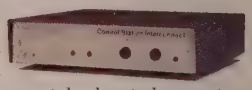
SDI-50 Automatic Simplex Interconnect Gives telephone access to handhelds and mobiles. Remotely programmable from any DTMF phone. Converts base stations to remote station accessible from any phone. VOX-enhanced sampling. Automatic CW ID. Interface cables included. 14¼"w x 8¼"d x 11 1/16"h, 3¾ lbs..... **$469.95**

CSI CONNECT SYSTEMS INC.

Fully automatic interface between an FM base radio and phone line to initiate and receive phone calls in a mobile or on an HT without assistance. The CS-800 & CS-900 each contain powerful microprocessor controlled features such as: • 90 Memory Speed Dialer • Redial • Built-in Programming Keyboard & Digital readout • Remote Base Mode • Regenerated Tone or Pulse Dialout • CW ID • Toll Restrict

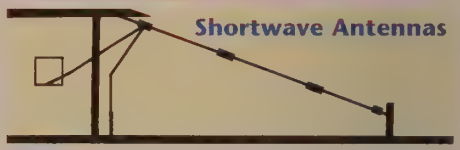


CS-800 Full Duplex Interconnect Operates full or semi-duplex and also has a built-in repeater controller. Simply connects to transceiver mic and speaker jacks. FCC and DOC approved.12-15 VDC. 7⅞"w x 7½"d x 2"h, 2½ lbs..... **$359.95**



CS-900 Control Station Simplex Interconnect For use with any simplex transceiver. Also use thru remotely located repeaters (from base) for added range. Digital voice delay standard. Connects to mic and speaker jacks of simplex transceiver. FCC & DOC approved. (Transceiver switching speed does not affect performance) 12-15VDC 7.9"w x 7.5"d x 2"h, 2½ lbs **$359.95**

ALPHA DELTA COMMUNICATIONS, INC.



DX-SWL Shortwave Sloper Antenna Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90 & 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an antenna tuner, handles up to 2000 watts. Overall length is 60 ft., requires 50Ω coaxial cable.... **$79.95**

DX-ULTRA Shortwave Dipole Covers AM broadcast through 30MHz. Efficient, low-noise, broadband performance for medium wave, tropical, international SW, military, government, embassy, maritime, aircraft, commercial & utility freq. Designed with inductors, parallel wire elements & center insulator w/built-in static electricity Protector. Length is 80 ft. – may be installed as a dipole, inverted-V, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connector accepts coaxial cable or balanced line. Assembled.... **$119.95**

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

DRAKE

R-8B Communications Receiver overs 10kHz–30MHz& 35–55MHz with the optional VHF converter. Alpha-numeric display, kHz & MHz modes; dual VFOs; 1000 memories; multi-function scanning; AM/FM RTTY/CW/LSB/USB modes; 5 voice bandwidth filters. Built-in receive preamp/attenuator and noise blanker. IF shift and notch. S-meter; dual time zone clock; passband offset; selectable AGC; built-in speaker; dual timers, multiple antenna inputs; sequential tuning; 3 selectable tuning step sizes. Direct entry of mode and bandwidth selection via keypad. Selectable sideband, synchronous AM detector. RS-232 computer control, optional interface software for MS-DOS computers. Connections for external speaker and tape recorder. Multi-voltage power supply. 13½"w x 5¼"h x 13"d, 13 lbs **$1199.95**

1590 VHF Converter *Low VHF* (35–55MHz & *High VHF* (108–174 MHz) coverage when installed in the R-8B..... **$219.95**

MS-8 Matching External Speaker for R-8B..... **$49.95**

SW-8 Communications Receiver Covers 100kHz to 30MHz, 87 to 108MHz (FM stereo with headphones) & 116 to 136MHz Aircraft. 70 scannable memories. Standard and synchronous detection AM, selectable SSB reception on the Medium and Shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual 6 or 4 kHz AM selectivity, 2.3kHz SSB selectivity. High contrast LCD readout; 100Hz tuning accuracy. Dual-mode clock and timer. AC adapter supplied, or use optional batteries for portable operation. 11"w x 5¼"h x 11¼"d, 10 lbs **$799.95**

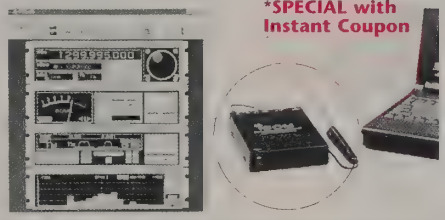
ICOM

R-8500 Super Wide Band All Mode Receiver Covers 0.1-2000MHz (cell blocked) w/10Hz resolution. All modes. AM, FM, WFM, LSB, CW & optional. TV-R7100 TV/FM adapter (view TV broadcasts when connected to CRT monitor). Dual VFOs and direct keyboard entry. Versatile scanning functions. - 1000 tunable multi-function mem.; 20 banks of 40 channels plus auto write area of 100 channels and skip area of 100 channels. 20 scan edge mem. channels store 10 sets of frequencies for programmed scan plus one priority. RIT, selectable AGC, noise blanker, tone, squelch, recording jack. **Selectivity:** 500 Hz, 2.3, 6 & 15kHz. RS-232C interface and voice synthesized readout. 110/220V AC; opt. 12V kit. 11⅞"w x 4⅞"h x 10⅞"d, 16½ lbs.....**SPECIAL $1499.95**

R-100-11 Mobile Desktop Scanner Covers 100kHz-799MHz & 900-1856 MHz (cell blocked). AM, FM wide and narrow modes; Direct keypad entry or selectable step knob tuning. 7 scanning modes. 121 memories: 100 for Frequency, Mode, Attenuator and Preamp settings; 20 scan edge memories for 10 pair of ranges for programmed scan and 1 priority. 24-hour clock and timer. Telescoping antenna plus 3 external antenna inputs. DC cord and mobile mount included 13.8VDC @ 1A **$849.95**

R-10-05 General Coverage Pocket Scanning Receiver Covers 500kHz to 1300MHz (cellular blocked. AM, SSB, FM wide or FM narrow modes. Programmable tuning steps. On-screen spectrum display, 1000 non-volatile mem. channels arranged in 18 banks of 50 channels. Scan by bank, mode, or program. Alpha-numeric characters can be entered to identify channels and banks. Noise blanker and automatic noise limiter. Auto frequency control (AFC) and more! Easy-to-read edge-lit LCD display, 24-hour clock w/timer, adjustable LCD contrast, signal indicator, power-saver function. Uses Ni-Cd, alkaline or other DC source. Ni-Cds & wall charger incl. 2.3"w x 5.1"h x 1.2"d.....***$299.95**

PCR-1000 Communications Receiver Computer Turn a PC into a world-wide communications receiver. Connect the PCR1000 to a lap or desktop IBM-compatible for reception of a wide range of frequencies. Listen to favorite stations in the background while running other applications. 100% PC hardware external, IBM PC compatible. Everything needed to connect to your computer included: power supply, built-in speaker, antenna, RS-232 cable and software • Frequency Coverage: 0.01000 to 823.999999MHz 849.000001 to 868.999999MHz, and 894.000001 to 1300.00MHz (Cellular blocked and specifications guaranteed guaranteed 0.5-1300MHz, only) • Modes: WFM, FM, AM, SSB, CW • Memory Channels: 1000 per file



***SPECIAL with Instant Coupon**

Requires: • IBM® PC-compatible computer • Windows® v3.1 or 95 • Intel 486DX4 or better (Pentium® 100MHz or better recommended) A least 10MB HD free space. At least 16MB RAM. FD drive, RS-232C (38400 bps or faster) serial interface. A 640 x 480 pixel display or greater ..... **SPECIAL $399.95**

PCR-100-12 Communications Receiver Computer Wide frequency coverage: 0.01-1300MHz (Cellular Blocked). Listen to marine, shortwave, CB, amateur radio, FM, TV audio, commercial radio, satellites, aviation and more. • Easy set up and use with 2 selectable control panels • AM, FM, WFM modes • CTCSS decode • Tunable bandpass filter • 13 tuning steps • Band scope • 20 banks of 50 memories each • Stereo audio output • Auto Noise Limiter • RF attenuator • Digital S-meter • S-meter squelch • Includes: wire antenna, OPC-743 serial cable, AC adapter and receiver software

Requires: Windows 95 or 98, 486DX4 or better, 10MB free HD space, 16MB memory, serial interface (38400 bps throughout), 640x480 pixel resolution ..... **SPECIAL with Instant Coupon $199.95**

YAESU

FRG-100B High Performance Communications Receiver Covers 50kHz to 30MHz – CW, SSB, AM modes; FM optional. 50 tunable memory channels and two band edge memories. Multi-function scanning . Adjustable SSB carrier offset, selectable AGC rate, noise blanker, all mode squelch, RF attenuator, twin 12 and 24 hour programmable clocks with on/off timer and sleep-timer, CAT system for PC control. Bright backlit LCD readout with adjustable control. 120/240 VAC or 12-14VDC @ 1.2A 9¾"w x 3½"h x 9½"d, 6.6 lbs *(See Price Guide for optional filters and high-stability oscillator)* **$619.95**

MFJ ENTERPRISES, INC.

8100W Regenerative A 10 ft. wire brings stations world-wide loud and clear. Tune international shortwave, Hams on SSB/CW, RTTY and packet. Covers 75-13M SW bands. Vernier drive tuning. Uses 9-volt battery, walkman-type earphones or plug-in speakers. 7"w x 2½"h x 6"d, 1 lb.....wired **$89.95**

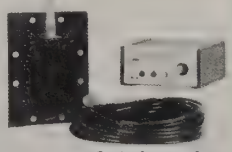
8121 World Band Receiver Receives FM, medium wave, long wave and 18 shortwave bands. Sony integrated circuit design provides excellent sensitivity and selectivity. Built-in telescopic antenna. LED tuning indicator. World time zone and frequency charts on back panel. Built-in 3" speaker. Size: 4½"h x 7"w x 1½"d Works on 6V DC or (4) "AA"s batteries **$39.95**

784B Super DSP Filter Eliminates those hetrodynes; reduces noise and interference on SSB/CW/AM, digital modes, VHF, EME, satellite. Tunable FIR filters minimize ring, prevent data errors. Up to 60dB attenuation. Tunable Spotting Tone™ auto tunes CW filter in narrowest bandwidth. 2W audio amp with AGC. 12V DC or 110VAC with MFJ-1315. 2½"h x 9"w x 6"d.... **$229.95**

752C SSB/CW Audio Filter (left) Pull out stations from noise and interference. Peak, notch, low or high pass control helps eliminate hetrodynes and interference. Filters tune 300-3000Hz; bandwidth varies from 40Hz to almost flat; notches to 70dB. Switchable inputs for 2 radios. Uses 9 to 18VDC or 110VAC with MFJ-1312B. 10"w x 2"h x 6"d ... **$89.95**

956 LW/MW/SW Preselector/Tuner (right) Improves reception of signals from 150kHz–30MHz. Boosts signals while rejecting images, intermodulation, other phantom signals. 2"h x 3"w x 4"d ...**$49.95**

959B Antenna Tuner & Pre-amp For 1.6-30MHz, provides an impedance match between antenna and receiver for best reception. 20dB pre-amp. Gain and 20dB attenuator. Two antenna inputs for two receivers. 9-8V DC or 110V AC with MFJ-1312 adapter. 5"w x 2"h x 6"d.. **$99.95**



1024 Outdoor Active Antenna For 50kHz–30 MHz reception. Separate RF amp module with 54" whip mounts outside, interconnect made by supplied 50 ft. coax to control unit, containing gain control and 20dB attenuator. Switches select between 2 receiver and auxiliary antenna. LED "on" indicator. Auxiliary in/output jacks. 12VDC or 110VAC with MFJ-1312. Control unit: 6"w x 2"h x 5"d, Outside module: 3"h x 4"w x 4"d..... **$129.95**

1020B Indoor Active Antenna Covers 300 kHz–30MHz; 5 bands. Telescoping (21") antenna provides good signal strength. Functions as a preselector when using an external antenna–minimizes intermod, improves selectivity, reduces noise. Uses 9V battery, 9-18V DC or 110V with MFJ-1312B. 5"w x 2"h x 6"d..... **$79.95**

462B Multi-Reader Easily decodes CW, RTTY, ASCII, AMTOR signals from amateur, commercial, military, weather, aero and marine. Displays decoded messages on a 16 character LCD display. Simply plugs into receiver phone jack. 12V DC, 5½"w x 2½"h x 5½"d **$169.95**

SHORTWAVE

AR-16B Wide Band Handheld Scanning Receiver

$239.95

- 500KHz to 1300MHz*
- Modes: AM, FM-w, FM-n
- 500 memory channels, 5 banks
- 25 scan search banks
- Scans 20 channels per second
- Preset 21 frequency band settings
- Automatic squelch • S-meter
- Monitor function for weak signals
- Back-lit keypad and display
- Includes antenna, two alkaline batteries, hand-strap, manual
- 2.4"w x 4.2"h x 1.2"d, 5.4 oz

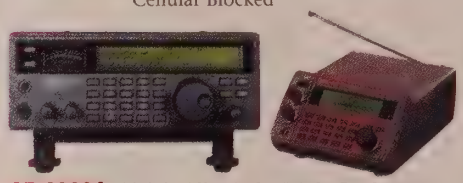
* Cellular Blocked

AR-8200B All Mode Wide-Band Modular Handheld Receiver

$549.95

- 500kHz to 2040MHz•
- 1000 memory channels (20 banks)
- Alphanumeric Display
- FM-w, FM-n, Super Narrow AM, AM-w, AM-n, USB, LSB, CW
- Programmable Tuning steps
- Illuminated Display and Keypad
- Spectrum Display scope function
- Computer control with free downloadable software
- Optional internal slot cards for memory expansion up to 4,000
- Noise limiter • Attenuator
- CTCSS squelch and search, tone eliminator, voice inverter
- Records/playback 20 sec. of audio
- Battery saver • Low battery indicator
- 2.4"w 5.7"h x 1.0"d, 0.75 lbs
- Uses 4 AA Ni-Cd batteries supplied, also uses alkalines or external 12V

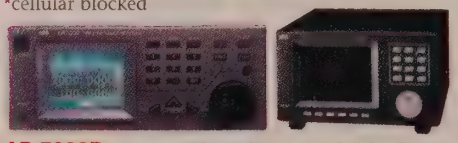
*Cellular Blocked



AR-3000A (right) All Mode High Performance Professional Monitor • 100KHz to 2036 MHz* • 400 Memory Channels • FM-w, FM-n, AM, USB, LSB, CW • Triple Conversion IF stage • Scans 50 channels per second rate • RS-232C port for computer control • Four search banks • Manual Tuning Dial • BNC antenna connector • Scans 20 channels per second • 5.4"w x 3.1"h x 7.9"d, 2.4 oz...**$1099.95**

AR-5000 High Performance Wide Band Receiver (left) • 10 KHz to 2036 MHz* • 1000 Memory Channels and 20 search banks with EEPROM storage • Multiple IF bandwidths • Scans 45 channels per second • AM, FM, LSB, USB, CW modes • Triple Conversion IF stage • RS-232C port • 20 search banks • Manual Tuning Dial • N-type and SO-239 antenna connectors • 12VDC @ 1A, adapter incl.• 8"w x 4."h x 10"d, 4 lbs. **Special Order**..... **$1799.95**

*cellular blocked

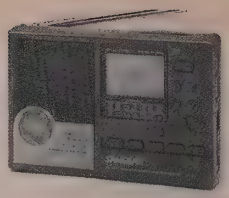


AR-7000B Advanced Technology Wide Range Receiver (left) • 100KHz to 2GHz* • Triple Conversion + DSP IF Stage • Color LCD Video Display • Selectable NTSC or PAL Video output • 1500 Channels • FM-w, FM-n, AM, USB, LSB, CW• 2 VFOS • Alphanumeric Channel Labels • AM, FM, LSB, USB, CW • Computer Programmable • RS-232C & DIN ports • Spectrum Display • Adjustable Squelch Tail Delay • 8 programmable Search Banks • 8 Programmable Scan Banks • Manual Tuning Dial • Scans 20 channels per second • BNC antenna connector • 12VDC @ 1A, adapter incl. • 3.5"h x 8.6"w x 9.5"d, 7.7 lbs. **Milwaukee Only** **$1149.95**

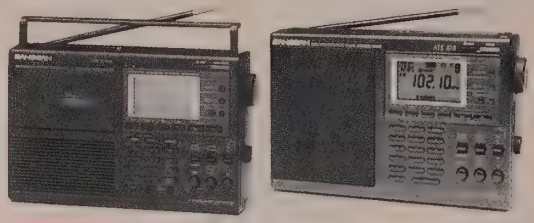
*cellular blocked

SDU-5500 Spectrum Display Unit (right) • Visually identify signals and relative strength • Works with AR-5000/AR-3000A, ICOM Base and other receivers with a 10.7MHz IF output • 10MHz bandwidth – 10kHz to 2600MHz • 5 kHz/30Hz resolution • White/blue mono LCD monitor **$999.95**

SANGEAN™



ATS-303 PLL synthesized. 13 bands, covers 2.3 to 7.3 & 9.5 to 26.10MHz. AM, FM, FM stereo with headphones. Selectable continuous tuning across frequency range and/or shortwave band. Time & frequency display, auto or manual station search, 20 station memories. Large LCD display, tuning LED. Clock with radio or buzzer alarm & adjustable sleep timer. MW 9K/10K switch for overseas. Low battery icon. Requires 4 "AA" batteries or external. 6V DC. 6½"w x 4¾"h x 1⅜"d,15 oz..... **$89.95**



SR-77 Miniature AM & FM Stereo portable Receiver Deep Bass Boost feature. Uses single "AAA" battery. Only 3"w x 1½"h x ⅝"d. No speaker, comes with stereo earphones **$34.95**

ATS-818CS (left) **World Band Receiver with Programmable Cassette Recorder** 16 bands, continuous coverage 50kHz–30MHz. AM/SSB/CW/FM modes; stereo via headphones, 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary dial. AM wide or narrow filter, tone and RF gain controls, signal strength and battery indicator. Programmable cassette recorder, play and record LED indicator, auto-stop feature. Clock with dual time display, alarm and sleep timer. Uses seven "AA" batteries (not included). Includes AC adapter and external antenna adapter. 11½"w x 7¾"h x 2¾"d, 5 lbs **$229.95**

ATS-818 (right) **World Band Receiver** All features of the ATS-818CS, except no cassette recorder .. **$179.95**

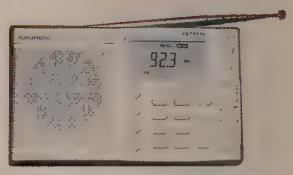
ATS-909 FM-Stereo/MW/LW/SW PLL Synthesized Receiver Five tuning methods: Direct Frequency, Autoscan, Manual, Memory Recall and Rotary, 307 memories. Stereo via earphones, SSB reception. MW 9k/10k switch. AM Wide/Narrow filter and FM mono/stereo selector. Dual time with three timers and sleep timer. Clock feature displays 42 world city times. RF gain/tone controls. Lock switch, recorder output jacks, battery and signal strength indicator. Uses four "AA" batt. or 6V DC; AC adapter incl. 8½"w x 5⅜"h x 1⅜"d, 1.9 lbs.. **$279.95**

ATS-606A Compact Digital All Band World Receiver Continuous ALL BAND coverage 153kHz to 30MHz. AM/FM (FM stereo with earphones). 54 memories, manual or keypad tuning, 1khz/step fine tuning, scanning, LCD display. Dual time clock and sleep timer. 5¾"w x 3½"h x 1¼"d..... **$169.95**

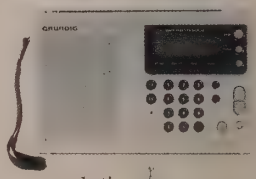
DT-200V Broadcast & TV Band Receiver (left) • Fits in shirt pocket or clips to belt. Covers AM and FM broadcast bands (FM stereo via headphone), plus the audio portion of TV channels 2 to 13. LCD display, up and down tuning buttons, auto-scan, 19 memories, automatic shut-off, built-in speaker. Belt clip and stereo earphones included. Uses two "AA" batteries. 4⅜"h x 2⅝"w x ¾"d, 5 oz **$79.95**

ATS-404 Full Performance, Full Featured Digital, AM/FM Stereo Shortwave Receiver CONTINUOUS COVERAGE – tunes continuously all shortwave bands and any frequency in between. AM reception with 9k/10k switch, FM plus FM stereo with earphones. Keypad entry and auto and manual search buttons, 45 memory presets, auto memory scan. Illuminated LCD display, tone control, lock-switch. Dual time (12/24 hour) clock and adjustable sleep timer with new Human Wake System. Carrying case and stereo earbuds included. Uses four "AA" batteries 6½"w x 4"h x 1¼"d **$99.95**

GRUNDIG



Yacht Boy 300PE Covers AM and FM broadcast bands with FM stereo via headphones, and 13 shortwave bands. LCD display, direct entry tuning, 24 preset memories. Quartz clock, AC adapter supplied. Requires (3) "AA" batteries (included) or supplied AC adapter. 5½"w x 3½"h x 1¼"d..... **$99.95**



YACHT BOY 400PE Covers 1.6 to 30MHz, all SW bands, FM broadcast band (stereo with earphones), AM and long wave broadcast bands. Direct keypad frequency entry or scan tuning with 40 memories. SSB reception with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function backlit LCD display shows dual zone 24 hour time, frequency, band and signal strength. Dual selectivity. Automatic turn-on and sleep timer. Includes stereo earphones, external reel-up antenna for shortwave. Includes carrying pouch and AC adapter. Requires (6) "AA" batteries 4½"h x 7⅛"w x 1⅜"d, 1½ lb..... **$199.95**

Mini-World 100PE World Band Pocket Radio (right) Puts the world in your pocket! Covers AM/FM (FM stereo via headphones) and 6 shortwave bands. Built-in speaker, telescoping and ferrite bar antennas, LED indicator. Includes earphones and belt clip. Uses (2) "AA" batteries (included). Only 4"h x 2½"w x ¾"d..... **$49.95**

TRAVELLER II (left) Covers AM/FM broadcast and the five shortwave bands. Multi-function LCD display, pushbutton and slide controls, tuning indicator. Clock with travel alarm and World Time selection switch; select a city and read the time! jacks for earphones. Uses (3) "AA" batteries (included). 5½"w x 3½"h x 1¼"d ..... **CLOSEOUT $49.95**

TRAVELLER III DIGITAL (right) Covers AM/FM broadcast and the shortwave bands. Multi-function LCD display, pushbutton and slide controls, tuning Push button tuning, 20 preset memories plus alarm/clock functions. Includes carry case, SW listening guide..... **CLOSEOUT $99.95**

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World Band Receiver Radios

TOOLS
FOR
GLOBAL
EXPLORATION

SONY

Chart the four corners of the world...

ICF-SW1000T

With the ICF-SW1000T, you can tune [illegible] record—news or other programs from [illegible] The built-in stereo cassette recorder lets you [illegible] directly from the radio and offers a convenient [illegible] Record Function. Ten-key Direct Access™ tuning [illegible] tuning in your favorite distant stations, while synchronous detection circuitry ensures the clearest possible reception.

- LW/MW/SW/FM Stereo Reception over a wide range of frequencies.
- SSB (Single Side Band) and synchronous detection for reception of SSB broadcasts. Can also help reception of weak signals.
- PLL Quartz Digital Synthesized Tuning for accurate and drift-free tuning.
- 3-Page Random Memory preset tuning to save your favorite stations. Total of 32 random memory presets.
- 1 KHz Step Tuning to lock in on precise station reception.
- Stereo Cassette Recorder (play/record) with auto reverse and tape select to record directly from the radio or play your own cassettes.
- Timer Record Function to record directly from the radio at a preset time.
- Built-in Clock with alarm, dual standby and sleep timer function.
- Dimensions (WHD): 7" x 4 1/8" x 1 5/8".

Get to know the world as you never have before with Sony World Band Receiver™ radios. High-performance Sony World Band Receiver radios and accessories boast the advanced technology that makes your global exploration possible.

Sony receivers let you survey breaking events and world business trends, enhance your language skills or your cultural awareness, follow major sporting events or simply track the weather. And user-friendly functions, such as built-in clocks and convenient tuning methods, make it easy.

AN-PL1

Active Antenna

This lightweight active portable loop antenna enhances your receiver's sensitivity for clearer reception of even weak signals.

- Provides high sensitivity and noise reduction.
- Active antenna controller with rotary tuning.
- Works with most Sony World Band Receiver radios
- 19" loop antenna that folds to 7" for ease in portability.
- Extremely easy to mount in a variety of conditions.
- Soft carrying case supplied.

ICF-SW7600G

Turn on the ICF-SW7600G and meet the cultural heroes and pop icons of countries around the world. Ten-key Direct Access tuning and 22 station memory presets make finding your favorite stations push-button easy.

- AM (LW/MW/SW) and FM Stereo Reception.
- PLL Quartz Frequency Synthesized Tuning for accurate and drift-free tuning.
- Synchronous Detection Circuitry to reduce fading and interference.
- Dual Conversion Super Heterodyne Circuitry for increased sensitivity.
- SSB Reception for a wider range of listening options and improved reception of weak signals.
- Manual and Auto Scan Tuning.
- 1 KHz Step Tuning to lock in on precise station reception.
- Built-in Clock with sleep timer and dual standby functions.
- Large 3" Speaker.
- Dimensions (WHD): 7 5/8" x 4 3/4" x 1 5/16".

From the comfort of home.

Follow the course of world politics and business...

ICF-SW77

Staying on top of world events is virtually [illegible] with the ICF-SW77. A 5-event programmable timer [illegible] of programs you don't want to miss and allows unattended [illegible]. Up to 162 memory presets help you keep track of favorite [illegible] for easy tuning, while Station Name Tuning allows direct [illegible] by broadcaster name.

- AM (LW/MW/SW) and FM Stereo Reception over a wide range of frequencies.
- PLL Quartz Frequency Synthesis Tuning for optimum stability and better reception.
- SSB Reception for a wider range of listening options and improved reception of weak signals.
- Station Name Tuning (with editable labels).
- Synchronous Detection Circuitry to reduce fading and interference.
- Backlit LCD Display with contrast adjustment.
- 10-Key Direct Access Tuning.
- Universal Time Coordinator with world time scale.
- Manual or Automatic Scan Tuning with 50 Hz step tuning.
- Electronic Rotary Tuning Dial for convenient manual tuning.
- 5" x 3" Speaker for excellent reception of voice or music broadcasts.
- Dimensions (WHD): 10 7/8" x 6 7/8" x 1 7/8".

With Sony World Band Receiver radios, you can tune in broadcasts on familiar FM and AM and shortwave frequencies. Short (higher-frequency) waves are reflected by the Earth's ionosphere, rather than absorbed like long and medium waves, so they can travel great distances—and you can hear programs from halfway around the world.

Because shortwave broadcasts can be adversely affected by atmospheric conditions, programs are often broadcast at various times and/or on various frequencies. The advanced reception and tuning features of Sony World Band Receiver radios help to maximize your ability to receive the programs you want to hear.

ICF-2010

Performance and convenience distinguish the ICF-2010. It begins with an industry reputation as one of the best World Band radio receivers ever made. Combine this with tuning accuracy and reliability and the ICF-2010 has become a reference standard of the industry. Direct Access tuning for directly keying in station frequencies and 32 station memory. With the ICF-2010, you can receive Air Band as well as FM and full AM frequencies.

- Full AM Band Coverage (LW/MW/SW) plus FM and Air Band Reception
- SSB Reception for a wider range of listening options and improved reception of weak signals
- Dual PLL Quartz Frequency Synthesized Tuners for superb reception
- Synchronous Detection Circuitry reduces fading and interference
- Selectable IF Band Width
- Selectable Automatic and Manual tuning
- Automatic Time Off function
- Clock with dual standby function using power from batteries (Model ICF-2010 only)

ICF-SW40

With a full band range of frequencies, the ICF-SW40 is an easy-to-operate, user-friendly receiver that's ideal for polishing your language skills and a host of other uses.

- Easy to use design combines the ease and familiarity of conventional analog operation with the accuracy and stability of digital tuning.
- AM (LW/MW/SW 1-11) and FM Stereo Reception.
- PLL Quartz Digital Synthesized Tuner for drift-free tuning.
- 20 Station Memory Presets for easy tuning of favorite stations.
- 1 KHz Step Tuning to lock in on precise station reception.
- Built-in Clock with dual standby function.
- Dimensions (WHD): 6 3/4" x 4 1/4" x 1 7/16".

Or immerse yourself in international cultures.

Savor local color when you travel...

ICF-SW100S

World Band Receiver Radio Kit

Experience any destination as the locals do with the ICF-SW100S. About the size of an audio cassette and weighing less than 8 ounces, it's ideal for travel. You can tune in local broadcasts or search for frequencies you don't receive at home. And its World Time Clock, with 24-city name/time display, lets you calculate the time in any city worldwide.

- AM (LW/MW/SW) and FM Stereo Reception.
- PLL Quartz Frequency Digital Synthesized Tuning for accurate and convenient tuning.
- Dual Conversion Super Heterodyne Tuner Circuitry for high sensitivity.
- 50 Station Memory Presets.
- Editable Station Labels.
- Auto Scan, Manual and 10-Key Direct Access Tuning.
- Built-in Clock with sleep timer and dual standby function.
- 1 KHz Step Tuning to lock in on precise station reception.
- Kit includes compact stereo headphones, 120 VAC adaptor, active antenna and soft carrying case.
- Dimensions (WHD): 4 3/8" x 15/16" x 2 7/8"

ICF-SW50

[illegible] simplicity. A travelin[illegible] receiver [illegible] for [illegible] students—just about [illegible] a News/Music tone switch, [illegible] maximum clarity whether you're listening to local [illegible] music.

- [illegible]-band Receiver including FM stereo, AM and SW Bands 1-10
- Dual Conversion Tuner Circuitry for high sensitivity.
- 10 Station Memory Presets
- Digital Synthesized Tuning to simplify tuning in the desired station.
- Auto S[illegible]
- 1 KH[illegible] on precise [illegible]
- Built[illegible]
- Dimen[illegible] 6 3/4" [illegible]

Whether you are listening to programs at home or abroad, for business or pleasure, you can count on the sensitivity, selectivity and stability of Sony receivers to deliver the clear reception and ease of operation that you want from a world band radio.

Sony receivers offer such features as Synchronous Detection, PLL Quartz Synthesis Tuning, Direct Access tuning and Single Side Band reception to ensure the ultimate in clear reception and easy tuning. Sony World Band Receiver radios—there's a model that's right for you.

ICF-SW12

- 11-Band Receiver including FM Stereo, MW, LW and SW Bands 1-9.
- Designed for travel [illegible] and with portability.
- World Time [illegible] Universal Time Coordinator to calculate time for cities worldwide.
- Backlit LCD Display [illegible] viewing of time and alarm settings.
- LED Tuning Indicator for precise center-frequency indication and [illegible] tuning.
- Built-in Alarm with [illegible] snooze button.
- Dimensions (WHD): [illegible] 4 3/8" × 3 1/8".

ICF-SW11

Whether you travel across the country or around the world, the compact ICF-SW11 can bring you the programs you want to hear.

- 12-Band Receiver including FM Stereo, MW, LW and SW Bands 1-9.
- Easy Analog Tuning with LED Indicator.
- FM Stereo Headphone Jack for private listening in noisy environments.
- DC-in Jack for optional AC adapter to conserve battery life.
- Compact size.
- Dimensions (WHD): 6 1/2" x 3 3/4" x 1 5/16".

But never be far from home.

Also available in teeny weeny version.
ICF-SW07
The Sony ICF-SW07 World Band Radio® holds nearly 3000 frequencies in memory, and is still small enough to take anywhere. Its replaceable EEP Rom Chip is preprogrammed with the world's top stations. And each year Sony will offer an updated chip for less than twenty dollars. You can also preset up to 100 of your favorite stations with the "My Memory" button. And tuning is easier than ever. So listen to the world from anywhere in yours, and leave the satellite dish at home.
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CLT Scanners The First Scanners with a Built-in AM/FM Radio & Alarm CLock...

BC-244CLT • Clock/Alarm • 30 programmable channels, 10 bands • Full frequency LCD display • Channel lockout • Memory back-up • Manual channel access • One-touch weather **$99.95**

BC-248CLT • AM/FM Radio with 20 presets • Clock/alarm with snooze • 50 programmable channels, 10 bands , 5 banks of 10 channels each • One-touch weather • Full frequency display • Auto squelch • Lockout • Memory back-up • Manual access • Delay • 5 priority channels **$109.95**

BC-278CLT • AM/FM Radio with 20 presets • Clock/alarm with snooze • 100 channels, 12 bands, 5 banks of 20 channels each • 800MHz coverage (cellular blocked) • One-touch weather with S.A.M.E. weather alert • Full freq. display • Auto squelch • lockout • Memory back-up • Manual channel access • Programmable delay • Data skip key • Programmable search • Programmable service search • 5 priority channels..... **$189.95**

BC-350A • 50 channel, 11 band Mobile/Base scanner with Aircraft and instant Weather • Super Turboscan™ @ 100 channels per second • Full frequency LCD display • Private Channels, 20 programmable and scannable • Police channels • 10 programmable fire and emergency channels • Marine channels • Band search • Lockout channels • Mounting bracket, AC adapter, telescoping antenna cigarette and DC power cords • 5¼" x 6⅜" x1⅜", 1 lb. 11 oz **$119.95**

BC-895XLT • "Trunk-Tracker" • 300 channels, 12 bands including Aircraft and 800 MHz, 10 banks • VFO control – covers 29 to 956 MHz (cellular blocked) • 10 priority channels • Turbo™ Scan • One-touch weather with Weather Alert • Manual channel access • Built-in CTCSS • Trunk search • Scan lockout and delay • RS-232C port • Signal strength meter • Auxiliary tape output • Automatic store • 30 trunking channel indicator annunciators • 3-day memory backup • Programmable search • Lockout • 10⅞"w x 3⅜"h x 7½"d, 3½ lbs **$219.95**

BC-9000XLT • 500 channel continuous band scanner • VFO control – covers 25 to 1300MHz (cellular blocked), 20 banks • 10 priority channels • AM-FM/wide & narrow FM modes • TurboScan™/search • Iluminated LCD dot matrix alpha display • Data skip • Transfer • Auto store; Auxiliary line output for recording • 110V AC adapter • Optional CTCSS •10½"w x 7½"d x 3½"h, 4 lbs..... **$429.95**

BCT-7 Bear Tracker 800 • Pre-programmed with all frequencies for highway patrol, D.O.T, local/county police, news, fire, aircraft & CB services. Selectable by state (except HI) • 12 bands • 100 user programmable channels: • Highway Patrol Priority Alert • Data Skip •Weather Scan • 13.8V DC or AC operation • Mobile mount • 5"w x 7"d x 1⅜"h, 1 lb, 11 oz **$179.95**

BCT-12 BearTracker Highway Information System • Covers low, high, UHF and 800MHz highway patrol, police, sheriff, weather, news and transportation frequencies for all 50 states and Canada • Weather emergency tone alert • Priority • Channel lockout • Digital signal meter level meter..... **$179.95**

We accept I.M.P.A.C.® Government Credit Cards

BC-60/80XLT BC-120XLT BC-3000XLT BC-245XLT

BC-60XLT-1 Handheld Scanner • 30 program. channels, 10 bands – cover 29-512MHz • LCD channel display • Program. chain search • One-touch weather • Lockout • Mem. backup • Keypad lock • Scan delay • Manual channel access • Track tuning • Keypad lock • Uses 4 AA alkaline or nicad rechargable batt., or AC operation w/incl. 110V AC adapter • 2⅝"w x 6¾"h x 1½"d, 10½ oz..... **$99.95**

BC-80XLT Handheld Scanner • 50 program. channels, 11 bands, 5 banks - cover 29-956MHz (cell blocked) • 5 priority channels • On-touch weather • Manual channel access • Bands search • Full freq. LCD display • Uses 4 AA alkaline or nicad rechargeable batt., or AC operation with included AC adapter • 2⅝"w x 6¾"h x 1½"d,10½ oz..... **$149.95**

BC-120XLT Handheld Scanner • 100 programmable channels with Aircraft coverage, 11 bands, 10 scanning banks • LCD display • Turbo Scan™& search • One-touch WX • 10 priority channels • Data skip • Memory backup • Rechargable nicad battery & charger • 2½"w x 1¾"d x 6"h, 10½ oz **$149.95**

BC-3000XLT Handheld Scanner 400 channels in 12 bands, 20 scanning banks • 10 priority channels • VFO control – continuous band coverage from 25 to 1300 MHz (cellular blocked) • TurboScan™ and search • On-touch weather • Auto-store • Channel lockout • Includes rechargeable nicad battery/charger • 2½"w x 1¾"d x 6"h, 12½ oz..... **$399.95**

BC-245XLT *"TrunkTracker II"* **Handheld Scanner** • 300 programmable channels, 12 bands including Aircraft and 800 MHz – covers: 29 to 956 MHz (cellular blocked) • *Trunk tracking technology:* trunk scan and search, truck lock out, trunk delay, and 10 trunk scan list • Programmable search • Memory backup • Manual channel access • Pre-programmed service search • Channel lockout • 10 priority channels • Rechargeable nicad battery and wall charger • 2½"w x 6"h x 1¾"d, 12½ oz **$229.95**

SC-180B *"SPORTCAT"*
Hear the car and pit crew action at auto races, hear the cockpit action at air shows or use the Sportcat like a traditional scanner to keep up with police, fire, emergency and rescue.

• 100 programmable channels, 12 bands/800MHz/Air, 10 banks • 10 prioriyt channels Twin TurboScan™ and search • Manual channel access • Instant weather • Full frequency, backlit alphanumeric LCD display • Rechargeable nicad battery and wall charger • Includes Sports Frequency Guide, AC adapter, rubber antenna, belt clip and earphone • 2½"w x 1¾"d x 6"h, 11 oz..... **$189.95**

VHF Low/High & UHF — Police, fire, sheriff, ambulances in smaller cities/towns. State police. Railroads. VHF-marine. 2-meter & 70cm Ham. Businesses. NOAA weather. Government.
VHF-Air — Commercial & private planes. Airport towers. Aviation-related communications. Air navigation.
800MHz — Police, fire & emergency services in major cities and metro areas (trunked). Some business 2-way radio systems. (Cellular frequencies are blocked.)
Extended Coverage — Military aircraft. Amateur radio. Some wireless microphones. Some radio/TV remote links. Microwave communications.

ALINCO

DJ-X10T Professional Multifunctional Wideband Receiver Covers 0.1 to nearly 2000MHz (cell blocked), & all modes. FEATURES: Dual VFO; Mem. (MR); Scan programming (PMS); One-touch switching; 1200 memory channels (40 CH x 30 banks). SCANNING: Programmable (PMS); Memory; Mode-selected; VFO scan; VFO linked; Priority. CHANNEL SCOPE: Switchable between 40 & 7 CH w/Contin., Interval, Peak & Single search. Built-in 24 hr clock with ON/Off timer. Built-in cable cloning func.....**w/Instant Coupon $319.95**

DIAMOND ANTENNA

D-130J Super Discone Antenna Ultra-wideband – covers amateur radio, air traffic control and other utility bands. Major component parts are stainless steel

• Receive range: 25 to 1300 MHz, transmit: 100 to 1300MHz – 50-54 MHz is tunable • Handles 200W 100 to 1300MHz; 50W at 50MHz • 66.9" high • Weighs 2.2 lbs • Mounting brackets are supplied..... **$89.95**

MONITOR AMERICA
A complete listing of public safety and business radio communications of almost every community in the nation. Includes maps, tone codes and repeater input/output frequencies. Listings of AM & FM radio stations with frequencies and formats. Race car teams, sections of *Disney* & other places **$29.95**

PEC SPECTRUM SPECTRUM FCC Database Over 3 mil. nation-wide freq. records. Incl: freq., call sign, class of station & radio service codes, company, transmitter city/county/state/lat./long., & no. of units for vehicle, marine, air, portable, & pagers. Records for police, hospitals, fire, state/local gov., theme parks & more. IBM compatible; Mac OS 7 or later..... **SPECIAL $9.95**

SCANNERS

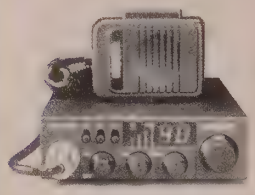
uniden

CB Radios

GRANT-LT AM/SSB Mobile CB Radio New! – Dynamic Squelch Control (DSC) for improved clarity • Full PLL synthesized 40 channel operation • **Single sideband**,12W PEP (AM, 4W) • LED Channel indicator • Backlit control knobs • Microphone gain, RF gain and clarifier controls • NB/ANL switch • PA/CB switch, dimmer control • Multifunction meter - indicates relative RF output, modulation, SWR and receive signal strength • TX/RX indicator, tone HI/LO switch • 7⅞"w x 9½"d x 2⅜"h, 5 lbs...**$169.95**

PC-78XL AM Mobile CB Radio Full PLL. synthesized 40 channels • DSC - Dynamic Squelch Control • Instant channel 9 • Microphone and RF gain controls • Delta tune control - Fine tunes received signal and reduces interference • Noise blanker and automatic noise limiter • PA/CB switch • Dimmer control • TX/TX LED indicators • Antenna warning LED - lights when high SWR condition is present • 7 7/32"w x 8⅝"d x 2 23/64"h, 4 lbs. 3 oz **$109.95**

PC-78XLW Same basic features as the PC78XL with the addition of NOAA Weather Channel reception with Weather Alert **$129.95**



PRO-520XL Compact 40 Channel AM Mobile CB Radio 4W • Instant channel 9 access • 4- segment S/RF meter • TX LED • LED channel indicator • RF gain • PA switch • Automatic noise limite Fits almost anywhere – only 4½"w x 6¾ "d x 1⅜" d, 1 lbs. 10 oz **$59.95**

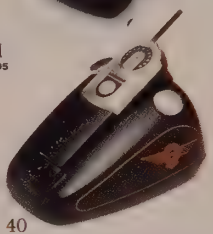
900MHz CORDLESS PHONES

Providing Extended Range & Cleaner Communications

EXP-7902 Cordless Phone w/Voice Scramble 40 channel auto-scan • Voice scramble security • Ultra-Clear plus noise reduction • 10 mem. • 3 One-touch priority keys • 7 hrs talk time • Long-life batt. • 32 digital redial • Page/fine feature • Desk/wall mount **$49.95**

EXA-7950 Cordless Telephone with Digital Answering System Integrated digital answerer • 40 channel autoscan • Time & day stamp • Remote message retrieval • 15 min. record time • Base spkrphone • 10 # mem. dialing • 3 one-touch priority keys • 14-day standby • Desk/wall mount **$84.95**

EXS-9110 Digital Spread Spectrum Cordless Phone Best privacy • 20 number mem. • 4 one-touch mem. keys • Battery back-up/recharge • 20 channel autoscan • Headset compatible • 10 day long-life battery • Page/fine feature • AutoTalk™ & AutoStandby™ .....C/O **$89.95**



EXS-9960 Digital Spread Spectrum Cordless Phone Ultimate in cordless phone Privacy!. Caller I.D. and call waiting I.D **$129.95**

EHD-1200GB Harley Davidson® 900MHz Cordless **Exclusive Harley phone crafted by Uniden to replicate the Harley gas tank.** • 900MHz extended range • 40 channel autoscan • 10 number memory dialing • three one-touch speed dial keys..... **$99.95**

Recommended Antennas for CB

COBRA

AT-70 Magnet mount 38½" base loaded mobile antenna. with 17 ft. coax and connector... **$24.95**

HUSTLER

HQT 55" top loaded whip with Mirror Mount bracket. Comes with 12 ft. cable with PL-259 connector. Chrome with a white coil **$27.95**

HQ-27M 55" top loaded whip with Trunk-lip Mount. Comes with 15 ft. cable and PL-259 connector. Chrome with a white coil **$36.95**

LARSEN

NMO-27C Base loaded 1/4 wave mobile **$33.95**

NMO-TLP Low profile trunk mount for NMO-27. Comes with 17 ft. coax and PL-259 ..... **$27.95**

NMO-MM Magnet mount for NMO-27. Comes with 12 ft. coax and PL-259 connector **$30.95**

SOLARCON

A-99 Base Station Antenna. Three-piece fiberglass design uses a half wave over a quarter wave section, and is tunable Entire 17 ft. 8 in. length radiates producing about 3 dB gain..... **$64.95**

GPK-1 Ground plane kit for A-99. Adds 30% more power gain and lower angle of radiation..... **$39.95**

WILSON

W-1000 5 ft. base loaded mobile antenna. Available in three mount configurations. All come with 18 ft. cable and PL-259 connector.

Roof, thru-hole mount **$54.95**
Trunk mount **$62.95**
Magnet mount **$72.95**

Cobra® SOUND-TRACKER® SYSTEM

Technology that dramatically improves the transmission and reception of radio signals. "Cuts Noise Coming In... Strengthens Signals Going Out!" The result is a cleaner, clearer sounding radio with more "powerful" transmissions and less static or noise on reception.

29LTD ST AM Mobile CB Radio Sound-Tracker™ System • Maxi RF output power • Combination S/RF meter • Built-in SWR indicator • Switchable auto noise limiter and noise blanker • Instant channel 9 & 19 • Delta tune clarifier • CB/PA switch • Dimmer switch • RX/TX indicators • 4 9/16" x 1¾" x 6⅝", 2½ lbs..... **$149.95**

29WX ST AM Mobile CB with Weather Band Same looks and basic features as the 29LTD ST with addition of a CB/WX switch to select between CB operation and weatherband mode. This allows reception of 7 NOAA VHF weather channels. If threatening weather is nearby, the National Weather Service may broadcast a 10 second alert tone which will be heard through the CB, even if the CB/WX switch is in CB mode. (dual band ant., such as Wilson 1000, recommended for best WX reception) **$159.95**

148GTL ST Full Featured AM/SSB Mobile CB Radio 12W PEP SSB RF output - increases range capabilities with SSB oper. • 4W AM RF power (FCC max. allowed) • 120 channels - full 40 & 80 of SSB oper. • Dual conversion AM receiver - designed to maximize freq. response & image/spurious rejection • **Additional Features:** USB/LSB/AM oper., Digital channel indicator, RX/TX indicators, Switchable noise limiter & blanker, RF-gain control, Hi/Low tone switch, PA capability, SWR indicator, Instant channel 9 • 7¼" x 2¼" x 8⅝", 6 lbs..... **$169.95**

Reflecting trends in new vehicle designs, this mobile has sculpted features and muted graphics giving it a dynamic look that will complement any vehicle of today. Easy install into most vehicles.

19DX II Compact AM Mobile CB Radio Electronic tuning/40 channels – down/up tuning buttons • Digital channel display • 4W RF output power – (max. FCC allowed) • Instant channel 9 – instant access to National Emergency Channel for help • Combination S/RF meter – indicates incoming signal strength and RF output • CB/PA switch – selects CB oper. or PA operation for communicating outside the vehicle • 4 9/16" x 1¾" x 6⅝", 2½ lbs..... **$49.95**

THE ASSOCIATES®

AES is first in bringing you the most innovative financing in the industry. In cooperation with the largest finance company on the New York Stock Exchange, The Associates, AES now gives you the ability to get instant approval on a revolving credit basis. Another way for you to own the equipment you want, TODAY.

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FRS Family Radio Service

For non-commercial use. FRS shares GMRS frequencies but you do not need a license to operate. Uses include: family communications while camping, taking trips to the beach, hiking, walkings, jogging, parks, amusement spots, sking, mobile caravans, etc. Any trip where two or more people need to stay in touch for safety or convenience. Power – 100mw to 0.5W ratings of hand held portables allow range of up to 2 miles, line of sight.

GMRS General Mobile Radio Service

A personal radio service available to an individual with the proper FCC license. It is a two-way voice communication service to facilitate the activities of the individual's immediate family members. You can discuss your own commercial and/or family business activity. Higher powered two to five watt hand-held portables allow communications over one to five miles.

MOTOROLA

FRS RADIOS

14 FRS Channels:
462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875, 462.7125, 467.5625, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875, 467.7125 MHz

Common Features:
38 interference eliminator codes • Built-in hands free oper. (VOX) – when used with opt. audio accessory • Time-out timer • Transmit light • Audible low batt. alert • Operators manual • 3¾"h x 2¼"w x 1⅜"d x 6½"h w/antenna • 1 year warranty

TalkAbout 250
Additional Features:
• Scan • "Talking" channel confirmation • Battery meter • LCD display • Audio accessory connector • Removeable belt clip
53543 (Camo) **$89.95**
53590 (Blue) **$79.95**
53592 (Black) **$79.95**

TA280 SLK (NiMH battery)
Additional Features:
• Programmable scan • Multiple audible call alerts • Multiple VOX sensitivity levels • Electroluminescent display • Lock/light button • Auto-power off • Battery meter indicator • Single pin audio accessory connector • Removeable carry holster • Alkaline batt. tray • 6.05oz w/three AA batteries
53716 (Black) **$119.99**

GMRS RADIOS

GMRS Interstitial Frequencies
462.5625, 462.5875, 462.6125
462.6375, 462.6625, 462.6875
462.7125MHz
GMRS Primary Frequencies
462.5750, 462.6250MHz
GMRS "Emergency" Frequency
462.6750MHz
• 38 Interference eliminator codes
• Built-in VOX operation (when used with opt. audio acc.)
• Scan capability
• Voice-assisted programming
• Low battery alert • Transmit light
• Audio accessory connector
• Removeable spring action 2.5" belt clip
• Rechargeable battery • 10hr charging adapter

TalkAbout DX
• 2W • 5.25"h x 2.5"w x 1.25"d, 11.1 oz
53544 (Grey) **$189.95**

TalkAbout DXDPS
Additional Features:
• Alkaline battery tray (6 AA batts. not included)
• 2W • 6.25"h x 2.5"w x 1.25"d, 11.7 oz.
53547 (Grey) **$199.95**

SAVE $$$ - We have 100's of Used and Demo items in stock, and the inventory changes everyday. Our WEB site has a complete up-to-date list, or *Call Toll* Free to check on your needs.

maxon

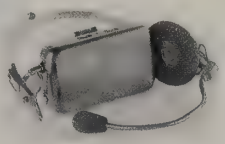
GMRS RADIO

GMRS-21X GMRS Radio 1 Watt RF output • 2 channels:–462.575 and 462.625 MHz • Includes rubber duck antenna, slide-on rechargable Ni-Cad battery pack, AC/DC wall charger, belt clip and (4) AA alkaline battery holder • 5½"h x 2⅛"w x 1¼"d **$129.95**

49 MHz FM Personal Communicators

Low power, ¼ mile ave. range • Dual conversion superheterodyne receiver provides crisp, clear voice transmission • Compatible use for group communications • Push-to-talk or voice activated (VOX) - talk-to-transmit • No license required

CHANNELS: A – 49.830 MHz; B – 49.845 MHz; C – 49.860 MHz; D – 49.875 MHz; E – 49.890 MHz



MX-49SX A Single channel unit with a lightweight adjustable headset with retractable whip antenna and boom-microphone with windscreen. LED power indicator, battery charger jack. Range up to 1/4-mile. Uses two "AA" alkalines or rechargeable nicads. 5"w x 2½"h x 1"d, 9 oz. *Specify channel A, B, or E* **$29.95**

MX-49FX 5 selectable channels (A, B, C, D & E). The unique earphone and microphone pick up voice vibrations from the ear canal for transmit audio and also provides received audio. Will not interfere with helmets. Built-in antenna gives up to 1/8-mile range. Remote PTT button & channel selector. Uses three "AA" batteries. 5½ "w x 3"h x 1"d 6 oz. . **$49.95**

MX-49HX 5 selectable channels (A, B, C, D & E). Great for motorcycling, snow mobiling, etc. The helmet adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted OFF/ON, volume, VOX sensitivity and channel selector. Jacks for optional passenger intercom headset. Uses three "AA" batteries. 5½"w x 3"h x 1"d, 6½oz **$49.95**

PC-50 Handheld Communicator
5 selectable channels (A, B, C, D & E). Operate with or without the detachable headset with boom microphone, windscreen and whip antenna. Call-tone alerts person that you want to contact. Compatible with all Maxon 49MHz radios. Uses three "AA" batteries. 6"h x 2½"h x 1½"d, 8.2 oz.... **$49.95**

We WANT your Trade-in! - We are always looking for Clean, Late model SSB or FM gear. Look over the gear in this catalog, then call *Toll Free.* Tell the salesperson what you want and what you have to trade. He'll give you an immediate quote and work out the details.

Family Radio

ALINCO

DJ-S46 300mW output • 14 FRS channels, CTCSS encoder • 1750Hz courtesy beep & keystroke beep • Scanning • S/output indicator • Lighted display • Auto off • Uses 3 "AA" alk. or NiCad batt. or external power • 4"h x 2⅛"w x 1⅛"d .....w/Instant Coupon **$94.95**

MIDLAND

75-510XLB 500mw • 14 channels, 38-tone coded squelch • High-speed scan • PTT/VOX • 3 "AA" rechargable nicad batteries and wall charger included • 4¾"h x 2"w x 1¼"d **$79.95**

UBZ-AL14BK (left) 500mW output • 14 FRS channels • Battery saver function • Lamp function • Call tone transmit function • Audible low battery warning beep/blinking • Up to 30 hrs operation with (4) AAA alkaline cells • 3.75"h x 2.31"w x 1.19"d **$49.95**

UBZ-LH14BK FreeTalk™ (right) 500mW • 14 FRS channels • 38 talk groups (CTCSS) • Privacy talk voice • 4 call ring tones CORDS (In-Range Detect System) • Battery saver and auto power off • Low battery alert indicator/beep • Up to 40 hours operation with (3) AA alkaline cells • 3.5"h x 2.25"w x 1"d **$99.95**

ICOM

IC-4008A 500mW • 14 channels; 38 Group channels • "Call-Ring" & "Smart Ring" functions provide telephone-style ring with 10 different tones • Automatic transponder function automatically checks station availability and alerts you via function display indication • Fold-down antenna • Water resistant • Requires 3 "AA" alkaline batteries – 30+ hours • 4½"h x 2¼"w x 1"d **$79.95**

vertex YAESU

VXF-10 Adventurer 500mW output • 14 channels • Digital coded squelch (DCS) • Automatic Range Transponder System (ARTS) – ensures remaining in communications range • Receives nine different NOAA VHF weather channels • Uses three "AA" alkaline or Ni-cad batteries – 30 hours (typical: alkaline) • 4¼"h x 2¼"w x 1"d **$79.95**

Courier

PROCOM
Low Power VHF & UHF Handhelds
Ideal for Short Range Communications
Recreation • Construction
Factories • Security

Features Include: 10 synthesized programmable channels • Low/Med/High transmit power, 5W full output • Range 1 to 3 miles • Channel LCD digital readout • Channel scan w/channel lockout • Rechargeable nicad battery, AC charger, flexible antenna • Jacks for AC charger, earphone, external speaker/microphone, and external antenna with BNC connector • Optional programmable CTCSS tone squelch • F.C.C. license application included • 4¼"h x 2⅛"w x 1⅜"d, 15 oz

M-510* VHF model – programmable from 144 to 174MHz..... **$269.95**

MU-510* UHF model – programmable from 440 to 470MHz..... **$299.95**

*M-510 & MU-510 require programming
First unit ... **$54** – addtional units ... **$27** each

M-54 Similar features as models above. 5W with four channels. Comes with one channel installed for 151.625MHz. 7"h x 2⅜"w x1½"d, 1 lb **$199.95**

PERSONAL COMMUNICATIONS

MAGELLAN Navigation & Communications

Global Positioning Satellite (GPS) brings Satellite Navigation within reach of everyone! For navigation, hunting, etc. – tells you where you are, & how to get back. Each Magellan GPS includes a powerful 12 parallel channel receiver, wraparound rubber armoring, "EZstart" operation, auto averaging and a water-proof design.

GPS-300
This pocket-sized GPS features waterproof construction, impact-resistant rubber armor and a quad antenna. EZstart, go-to and other features show where you are, take you places and bring you back again. All-view 12™ assures accurate positioning. It holds 100 landmarks and a 10 leg route. It provides 3 screens displaying distance, bearing, heading, steering, speed and time. Also included: latitude/ longitude, map datums and 951mph maximum speed operation. The 9oz. unit runs on 2 AA batteries for 24 hours and comes with lanyard..... **$99.95**

GPS-315
Navigates to 20,000 major international cities or brings you back to 500 user-entered locations. Nine screens show bearing, heading, distance and speed. A 12 parallel-channel receiver offers performance under tough conditions. Auto-averaging averages your position while standing. Also included: 1200-point Track, BackTrack, best fish/game time, 10-year back-up battery, PC up/download and simulator. The 6.4 oz. unit comes in a waterproof, shock-resistant case. It runs on 2 AA batteries for 15 hours. Works with mapping software..... **$149.95**

GPS-320
This fisherman's GPS is a full-featured personal navigator with a large database of cities and regional marine aids and memory to store up to 500 waypoints/landmarks. Four navigation screens show direction, path traveled, and distance. A 12 parallel-channel receiver offers performance under the toughest conditions. Other features include: EZstart operation, 1200-point SmartTrack, BackTrack, best fish and game time, sunrise/set info and mapping software compatibility. It comes with a 10-year back-up battery and operates on 2 AA batteries..... **$199.95**

GPS ColorTRAK
Featuring the world's first *high-resolution, color display* in a portable GPS receiver – 128 x 64 pixels. Outstanding lock-on tracking with 8 graphic navigation screens including a real-time multiple route plotter with adjustable scale. Stores up to 500 user-entered locations and 20 eversible routes with 30 legs. The detachable super sensitive antenna for provides superior tracking ability. 4 AA batteries give 30 hrs. of continuous operation & everything is backed up by a 10-year lithium batt. Backlit display and keypad. Comes w/carrying case, wrist strap, batt., & User & Quick reference guide..... $50 Factory Rebate thru 1/15/00 **$279.95**

See Price Guide for selection of Magellan & Garmin Accessories

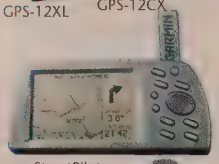
GARMIN®

Garmin's Personal Navigator GPS receivers are low-cost and full-featured. This family of satellite navigation equipment can guide you anywhere you want to go.

GPS-12XL GPS-12CX

GPS-12XL (left) 12 channel receiver with external antenna for fast, accurate position fixes in the toughest conditions including tree canopy and urban obstructions. Rugged, compact case ideal for boaters, hunters and hikers. 500 user waypoints with alphanumeric name and user comments, and 20 reversible routes of up to 30 waypoints each. TracBack™ navigation automatically turns your track log into a route back home. Nine waypoint alarms. Over 1000 track log points, position averaging, emergency erase, and cloning features. Up to 12 hours operation on four AA batteries **$219.95**

GPS-12CX Color Display (right) Nine built-in languages including French, German, Portuguese and Spanish. 2,048 track log points. Selectable position formats including MGRS and user-define grid. Provides heading, track, sunrise and sunset, ETE, ETA and other calculations. User selectable audible settings, TracBack™. Up to 36 hours of battery life **$269.95**


StreetPilot

StreetPilot Dashboard Mount Built-in map of the Americas with state and country boundaries, lakes, rivers, cities, U.S. state and interstate highways and some local thoroughfares. Accepts GARMIN cartridges showing residential streets, addresses and points of interest. Features: Large high resolution 240 x 160 pixel display; Three-level bright amber backlit screen and keypad; Automatic turn by turn guidance with manual route selections; Automatic waypoint and route naming; Storage for 100 waypoints; Trip planning and computer. Zoom key – 120 ft. to 800-mile range; Dashboard screen showing current trip segment, distance, direction; Clock and arrival alarms. Up to 16 hours on 6 AA batteries..... **$469.95**

GPS-III Plus

GPS-III Plus Dashboard Mount Features road maps without plug-in cartridges. Select vertical/horizontal screen display. Dedicated zoom keys, diagonal panning, auto start/stop trip timer, average/maximum speed recordings. Rocker keypad, backlit LCD display, full featured moving map plotting. Dedicated keys for zooming from 0.2–360 miles, user selectable navigation screens for compass or graphic highway steering guidance. Download data from MapSource CDs..... **$369.95**

NavTalk

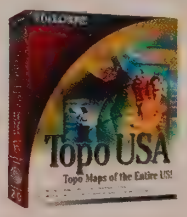
NavTalk™ Personal Navigator™ and Cellular Mobile Combines electronic mapping and GPS to cellular technology in single, hand-held unit. As you travel, your location is displayed in real time on a built-in map. At the touch of a button, you can send your exact position and have it displayed on another NavTalk unit. **Cell phone features:** • Customized Tabbed Phone Book • One-Touch Speed Dial; • Built-in Pager; • One-Touch Emergency Dial – subscribe to roadside assistance which receives distress messages. **GPS:** Shows Interstates with street exit info, cities, airports & more! CD ROM feature - plug into PC and download data from Garmin's optional MapSource™ CDs: U.S. Roads and Recreation (010-10215-00) and World Map (010-10215-01 **SPECIAL ORDER**) **$399.95**

DELORME®

Earthmate™ GPS Receiver *for Laptop PC* – **$159.95**
The new GPS Receiver from DeLorme features a slim design, the latest GPS chip technology from Rockwell, enhanced performance, and award-winning Street Atlas USA 6.0 software*. Connect to laptops and Windows® CE or 3Com® Palm Computing handhelds. Use the new Solus™ PRO handheld mapping and routing application available separately from DeLorme.

**Street Atlas USA® 6.0* is the latest version of America's most detailed street-level mapping software includes one million new streets, address-to address routing, enhanced GPS features including GPS voice navigation, expanded exit service information, and compatibility with Window®, CE and 3Com® Computing handheld computers. Lightning-fast search by individual street address, placename, area code and exchange, Zip code or lat/long. Create a sharp, detailed Travel Plan with your stops, driving time, and more. Connect to online weather, construction, and other useful travel information.

(Included with the Earthmate™ GPS Receiver)



TOPO USA™ *CD-Rom* – **$99.95**
From the maker of *Street Atlas USA* – now hikers, bikers and outdoor enthusiasts can preview topographic terrain in all 50 states and plan the perfect outdoor adventure. Profile hikes and backroad trips for elevation, distance and degree of difficulty using the cross-sectional view. Select 3-D or 2-D views. Create on-road and off-road routes. Print detailed color topographic maps. Works with the DeLorme GPS Receiver, 3Com®, Palm Computing® and popular Windows® CE handheld computers

MapSource CD Provides owners of compatible GARMIN GPS units with a variety of maps they need to get where they are going. Using a computer and MapSource software, enjoy high-speed transfer of maps from this CD to your GPS. For GPS-III Plus and NavTalk 010-10215-00 **$99.99**

Getting on Track with APRS
APRS, the Automatic Packet Reporting System, is an integration of packet radio mapping graphics and GPS into a single program for real time position tracking and reporting via radio. This book is a hands-on guide to installing and using new map based tracking systems..... ARR 175 **$14.95**

GPS

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Shakespeare VHF MARINE ANTENNAS

396-1 Center-fed 1/2 Wave Coaxial Sleeve Antenna A basic 3dB ant. designed to reduce signal fading when working in rough seas. Widely used by the Coast Guard. Use 4187 ratchet mount..... **$59.95**
- 5 MHz bandwidth, 3dB gain, 50W
- White Shakespeare fiberglass
- Brass and copper elements
- Deluxe chrome-plated brass ferrule
- One section
- 5 ft. length, 15' RG-58 cable w/PL-259

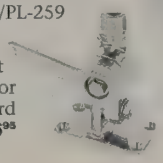
420 SKIPPER™ Center-fed 1/2 Wave Coaxial Sleeve Antenna Economical, and a good basic 3dB antenna for steady, day to day cruising in calm to moderate seas. Includes a polycarbonate lift/lay deck mount, leveling plate/hardware..... **$59.95**
- 5 MHz bandwidth, 3dB gain, 50W
- White Shakespeare fiberglass
- Brass and copper elements
- Polycarbonate ferrule
- One section
- 5 ft. length, 15' RG-58 cable w/PL-259

5101 Centennial™ End-fed Antenna w/Matching Stub High-end features in an 8 ft. antenna with a brass element and a smooth, high gloss, polyurethane finish that won't turn yellow in the sun. Use with 4187 ratchet mount **$49.95**
- 5 MHz bandwidth, 6dB gain, 50W
- One section
- Brass and copper elements
- Chrome-plated brass ferrule with standard 1" x 14 thread
- Includes 15 ft. RG-58 cable and a PL-259 coaxial connector

5206-C End-fed Antenna w/Matching Stub Economical, lightweight and self-supporting antenna for good communications where range is not the predominant factor. Use w/4187 ratchet mount... **$39.95**
- 3 MHz bandwidth, 6dB gain, 50W
- White Shakespeare fiberglass
- Chrome-plated brass ferrule
- One section • DC grounded
- 8' length, 15' RG-58 cable w/PL-259

5202 Collinear-phased 5/8 Wave Elements A rugged, professional quality antenna featuring a heavier duty radome and tough brass and copper construction for maximum efficiency and extra range. Use with 4187 ratchet mount **$69.95**
- 3 MHz bandwidth, 6dB gain, 50W
- White Shakespeare fiberglass
- Chrome-plated brass ferrule
- One section • DC grounded
- 8' length, 20' RG-58 cable w/PL-259

4187 Ratchet mount
Stainless steel. 4-way ratchet design with handle for deck or bulkhead mounting. Standard 1"-14 male threads..... **$36.95**



Nitelogger II
Auto Tape Recorder Activator Takes audio from 8Ω source & provides 600Ω match & voice activated relay oper. for tape recorder. Connects: radio exter. spkr jack, recorder remote & mic inputs. Makes simple crossband repeater by connecting 2 HTs. 110V AC adapter supplied..... **$69.95**

RC-1A Impedance Matching Patch Cord Provides a proper impedance match between 8Ω audio source and 600Ω tape recorder input and a proper loading for source device. Attenuator prevents recorder input overload. 3.5mm audio plugs..... **$19.95**

uniden Marine

MC-1010 80 channel Marine VHF Radio • All USA and International channels, 10 weather channels • Ultra compact rugged construction • Durable design microphone • Triple watch feature • Memory scan • Weather scan • 25 & 1W output • LCD display • External speaker jack • 12V DC @ 4.5A • 6⅛"w x 4 5/32"d x 2⅛"h, 1 lb. 12 oz..... **$139.95**

MC-1020 80 channel Marine VHF Radio • All USA and International channels, 10 weather channels • Ultra compact rugged construction • Quik Command™ microphone with touch channel 16 and 19 key • Triple watch Plus™ • Memory scan • Weather scan and alert • 25 and 1W output • LCD display and dimmer, back lit keypad • Public address • External speaker jack 12V DC @ 5A • 6⅛"w x 4 5/32"d x 2⅛"h, 1 lb. 12 oz..... **$149.95**

MC-535 80 channel Marine VHF Radio • All USA and International, 10 weather channels • Instant channel 16 • Memory scan • Dual watch • LED channel display • 25 and 1W output • Weather resistant • Front speaker, external speaker jack • 12 VDC @ 5A 6⅛"w x 7 7/16"d x 2 1/16"h, 2.4 lbs **$109.95**

HH-980 Deluxe 90 channel Marine VHF Handheld • Microprocessor controlled • All USA and International channels, 10 weather channels • Weather alert • Front-fire speaker • Watertight • All-channel scan • Instant channel 16 • 5/1W-selectable power • Dual watch/triple watch • LCD channel display • 7.5V @ 850mA from supplied rechargeable Nicad batt. pack • 2⅜"w x 1 5/16"d x 5⅜"h, 1 lb. 12oz **$199.95**

HH-940P 90 channel Marine VHF Handheld • All USA and International channels, 10 weather channels • All channel scan • Instant channel 16 and 9 • Triple watch electronic touch keypad • Backlit LCD display • 1W power output • Weather alert • Flexible rubber antenna • Keypad lockout • Battery charge indicator • Waterproof, lightweight and wearable • Rechargeable battery, drop-in charger • 2½"w x 1¼"d x 4 1/16"h, 8.8 oz..... **$149.95**

HH-955 90 channel Marine VHF Handheld • All USA and International channels, 10 weather channels • Memory scan • Backlit LCD display • Triple watch • Instant channel 16 and 9 • Weather alert 5 and 1W output • Flexible rubber antenna • Keypad lockout • Battery charge indicator • Weather resistant housing • Uses alkaline batteries or Ni-cad rechargeable battery (not included) 2½"w x 1¾"d x 6½"h, 19.5 oz.... **$129.95**

KENWOOD Marine

TKM-707 SSB Radiotelephone
A high-performance unit designed to meet the stringent demands of marine operation. Utilizes a heavy duty rustproof aluminum chassis and the highest quality parts to maximize performance.

• 150W RF Output Power • 2 MHz to 23 MHz Marine Band Operation with 500kHz to 30 MHz General Coverage receiver • 198 Memory Channels • Multi-Scanning • 2182kHz emergency alarm built-in Optional Tuner & More!

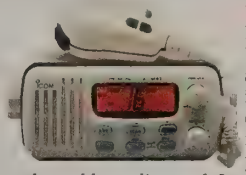
Special Order – **$1249.95**

ICOM Marine

M-710 SSB Marine Transceivers
Rugged, 150W SSB Transceiver, 1136 channels with 160 user-programmable memories, PC programmable, alpha numeric readout on large LCD.

M-710 (21) General version without 2182kHz alarm, marine bands only..... **Special Order $1399.95**

M-710-05 (22) Open version, covers 1.6 to 27.5 MHz, has 2182kHz alarm ... **Special Order $1599.95**



IC-M45AW VHF 25W Marine Transceiver Water-resistant gaskets are used throughout, including the mic. The durable, one piece aluminum diecast chassis provides dependability and good heat dispersal. Large backlit display shows all info. at a glance. • **'Tag' scan system** – add or delete channels at the push of a switch • **'Smart' microphone** – change channels or select output power without touching the front panel • **Dual and tri-watch functions** – monitor channel 16 while operating on another • All International and US channels are available, plus 10 weather channels w/weather alert function • Instant access to channel 16 and the call channel • Low battery indicator • 0.79"h x 2.36"w x 5.5"d **$199.95**

IC-M3A Mini Handheld Marine VHF Radio Programmable for U.S. and International channels plus 10 weather channels w/alert • Independent channel 16 • Full function and priority scanner • Dual/tri-watch - monitor channel 16 while operating another • 1/5W output • Large backlit display shows info. at a glance • Water resistant • Includes 6 NiCad batteries and wall charger 2¼"w x 5½"h x 1 1/16"d, 14.4 oz **$189.95**

Aircraft

A-22 VHF Air Band Transceiver Covers (COM) 118.-136.975, (NAV) 108-117.95MHz and memory channels Programmed scan, memory scan & lock • 5W output • Instant 121.5MHz • **NAV features:** 200 channel VOR nav with CDI, radial heading TO/FROM VOR, auto bearing set • Semi-duplex, combines VOR/COM oper. • Incl. Ni-cad rechargeable battery and wall charger 2½"w x 7¾"h x 1½"d, 1.4 lbs **$549.95**

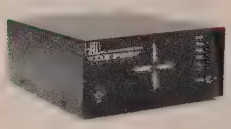
YAESU Aircraft

VXA-100-6/41B Aviator Pro
Features: 5W TX power (PEP 1.5W typ.) • 8 character alpha numeric display • 3-way display titling • Internal sidetone • 300 memory channels • Automatic Noise Limiter (ANL) • One-touch emergency frequency access • 10 NOAA weather channel receive • Automatic active weather channel scan • Priority dual watch function • Back-lit keypad and display • One-touch control knob • RX battery saver • Optional battery case • PC programming capability • MIL-STD 810 approved **Accessories Included:** Nicad battery, Headset adapter and Belt clip **$399.95**

VXA-100-16/41B Aviator Pilot
Features are the same as VXA-100/6 with the addition of: VOR TO/FROM display • Course Deviation Indicator (CDI) display • Split channel operation..... **$499.95**

HAL COMMUNICATIONS CORP.

P-38 Multi-mode HF Modem
A full-size 13½" DSP card for all AT compatible PC's. Provides the best all-around performance on CLOVER, PACTOR, AMTOR and RTTY. Does not require the use of Comm ports or IRQ's. Operating software for your PC is included. Latest updates are available through the HAL Techline and the Internet. Third party software, such as EXPRESS, RAGCHEW, WF1B is available. ..... **CLOSEOUT $289.95**



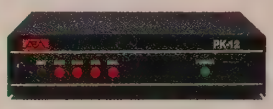
DXP-38 Multimode HF Modem
Stand-alone DSP Modem providing excellent performance on CLOVER, RTTY, ASCII, AMTOR an P-Mode. Both DOS and Windows (95, 98 and NT 4.0) software are provided at no additional cost. Uses the same serial I/O commands as the DSP-4100 and will operate with any third-party software written for the DSP-4100. 12V DC @ 0.6A. 3" x 7⅛" x 10"w. One-year warranty. **$395.95**

RTTY-1 Tuning Indicator
Easy to use and very acccurate. Works with virtually any FSK radio modem. The crossed LED bars show correct tuning for all popular FSK modes including Baudot Teletype (RTTY), ASCII Teletype, AMTOR, SITOR, P-Mode, HF Packet Radio. Filters: 2125 Hz (Mark), 2295 Hz (Space) 5.5"w x 3.75"h x 1.25"d, 0.5 lb. Requires +9V-18V DC @ 160 ma **$99.95**

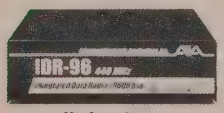
www.halcomm.com

AEA TIMEWAVE TECHNOLOGY INC.

PK-12 1200 bps VHF/UHF TNC
1200 bps, VHF Packet-ready; Gateway as a Node; PC PakRatt Lite™ Control software included; APRS™ software included; APRS Adapter Cable available; AEA Host mode; Advanced command set; Identify TCP/IP, TheNet and NetRom; GPS firmware and commands; Stand alone tracking; External TX adjustment. Perfect for base station, loaded with features for mobile. 12V DC, or accepts a 9V battery. 5¾"w x 5¼"d x 1⅞"h, 12 oz **$129.95**



PK-96/100K 9600/1200 packet TNC
9600 and 1200 bps packet-ready; GPS firmware standard; Remotely program. GPS commands; Stand-alone tracking; Hardware HDLC for accuracy; True DCD to hear weak signals; Gateway as a node; TheNet X-1J node firmware option available; Full MailDrop facility; PC PackRatt Lite™ terminal control software & APRS™ software incl.; AEA host mode; Advanced command set; Identify TCP/IP, TheNet & NetRom; Separate external TX for 9600/1200 bps adjustments; External reset. Windows™ and MacIntosh™ program available. Requires 12V DC. 6¼"w x 7½"d x 1⅜"h, 1¼ lbs. With 128K RAM..... **$169.95**



IDR-96 Integrated 440MHz 9600 bps Data Radio
Features PK-96 TNC technology and a 5W, crystal controlled radio operating on 441.05 MHz. Simple operation, no tuning! Full featured mailbox; Gateway node operation; Advanced GPS; Identification of TCP/IP, TheNet; and NetROM stations and more! PC PakRatt Lite™ and APRS™ software included. 12VDC..... **CLOSEOUT $299.95**

Kantronics Multimode Data Controllers

www.kantronics.com

KPC-3 Plus/128 ... $179.95
- 1200 bps – Now with more features
- Packet, GPS/APRS, Host, KISS and WEFAX modes, use with EMWIN
- Personal Mailbox (PBBS) now supports multiple calls
- Remote access, sensing and control with two A/D and two control lines
- PBS 100k, expandable with optional 512k RAM

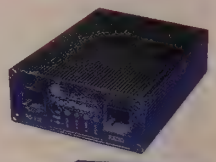
9612 Plus/128 ... $369.95
- 1200 port AND second port of 4800–38,400 bps
- Most modes/capabilities of the KPC-3 Plus and POCSAG (paging)
- Unique design allows the addition of *another port, high or low speed*
- Remote access, sensing and control capability
- Telemetry transmission capability

KAM 98 ... $399.95
- **Single Port** multimode TNC for HF and VHF use
- ALl the modes of KAM Plus with addition of A/D inputs/TTL outputs
- HC11 for more processing power to accomodate future upgrades
- Wider range of speeds; use 1200 bps packet on 10 meters

KAM Plus ...CLOSEOUT $369.95
- Dual port VHF/HF (1200/<=300 bps) multimode TNC
- Packet, GPS/APRS, Host, KISS, WEFAX, CW, RTTY, AMTOR, PACTOR, G-TOR®, TOR, and Free Signal Detection for HF e-mail
- 100k personal mailbox standard, expandable with optional 512k RAM
- Remote access capability
- NEWUSER mode and on-line help

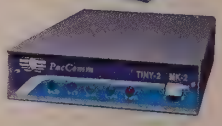
PacComm Packet Radio Systems, Inc.

www.paccomm.com



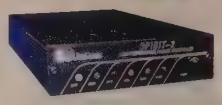
Pico 128K Miniature TNC Z-181 high integration MPU with one megabyte address space • Online help • Personal message system • APRS • Terminal programs for DOS and Windows included • Open squelch DCD circuit included • Optional internal GPS receiver & Slide-on battery pack option • Slide-on battery pack option 1"h x 2½"w x 3½"d • **Standard model with 128K RAM**..... **$149.95**

Pico Dual 128K Dual Serial Port model – adds hardware clock and second serial port for GPS or weather station to the standard model **$199.95**



Tiny–2 MK-2 Multi-purpose Basic TNC 32K RAM • TNC-2 EPROM compatible WA8DED host mode • KISS mode for satellite and TCP/IP Telemetery via RS-232 or TTL port • Disconnect header (will accept any TNC compatible modem) Packet communication for a weather node • 45ma. draw • 5"h x 7"d 1⅜"h **$149.95**

Tiny–2MK-2/GPS Tracker Basically the Tiny-II with a built-in GPS unit. Supplied with a small magnetic-mount Trimble GPS antenna **$499.95**



Spirit-2 High Performance Packet Controller Designed to be configurable by setting jumpers and installing optional logic devices to support various tasks without performance compromise..... **$239.95**

HandiPacket Packet controller Ideal for portable or mobile operation • Loaded with features • Built-in 10-hour battery pack • 1.28"h x 2.55"w x 4.15"d. **$229.95**

MFJ ENTERPRISES, INC.

www.mfjenterprises.com

1278B Multi-mode Data Controller
10 modes: PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex and Memory Keyer. Enhanced Mailbox, 32K RAM, 16-gray level modem, 20 LED tune indicator, Auto Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED, KISS interface, Host mode, Threshold control, RS-232/TTL ports. 12 VDC 9½"w x 9½"d x1½"h..... **$279.95**

1278B/DSP The 1278B w/DSP filter..... **$359.95**

1278BT Same as MFJ-1278B except Turbo version, includes a fast 2400 baud modem **$309.95**

780 DSP Board Plug-in "brick wall" DSP data filter for MFJ-1278 or MFJ-1278B..... **$89.95**

8621 2 meter Packet Data Radio
High-performance thru 9600 baud. Plug in TNC cable*, your antenna & power – you're ready for packet. Crystal control on 145.01MHz, 5W output. Requires 12 VDC @ 1A. 5"w x 5½"d x 1½"h..... **$119.95**

8631 220MHz Packet Data Radio Same as as 8621, but 223.700MHz and 3W output..... **$139.95**

8621X2 Dedicated VHF Data Radio for APRS Automatic Packet Reporting System transceiver. Ready to go on 144.39 MHz..... **$139.95**

***See Price Guide for pre-wired 8621-to-TNC cables.**
Crystals for other packet channels may be ordered from MFJ by calling 1-800-647-1800.

1270C TAPR TNC-2 Clone
Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX. KISS interface for TCP/IP, 256K EPROM & 32K RAM. TTL serial port, batt. backup. AX.25/Level 2-V2 software, hardware HDLC–full duplex, true data carrier detect for HF, multiple connects. interface cable, serial port connector and AC adapter. 12 VDC. 9½" x 7½" x1½"..... **$119.95**

1270CT Has all features of the 1270C plus built-in 2400 baud modem **$149.95**

1270CQ Has all features of the 1270C, plus built-in 9600 baud G3RUH compatible modem **$229.95**

2400 A 2400 baud modem, operates 300, 1200 and 2400 baud packet. For any radio **$29.95**

9600B A G3RUH compatible 9600 baud modem. Not all radios compatible with 9600 baud. Easy installation in MFJ TNCs..... **$99.95**

781 DSP for all TNCs
Separate unit gives your TNC (Kantronics, etc) Digital Signal Processing power..... **$119.95**

1272B/M TNC Switch Pushbutton selection for *voice* or *digital*. Specify radio and TNC connection. **$39.95**

See the Price Guide under MFJ for packet Software and Accessories for these products

PACKET

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Kantronics HF & Packet Modems

A Tradition of Quality and Innovation

Remember "THE INTERFACE," the UTU, KPC-1, KPC-2, and the KAM? They were all Kantronics innovations.

The CW and RTTY programs written for the VIC-20, C-64, TI-99, and other computers, were embedded inside the UTU using a custom microcomputer. This made it possible for any computer with a serial communications program to run CW or RTTY. Since that time, we've provided Pactor (1993) and G-TOR (1994) with our HF modems. We also pioneered personal packet mailboxes, amateur paging (1996), and incorporated advanced digipeating for APRS (1998) in our packet modems.

Here's the latest Kantronics lineup—the KPC-3 Plus, the KPC-9612 Plus, the KAM'98, and the the GPS Tracker—all descendants of those legendary products. These units feature the HC11 Motorola processor, more EPROM memory space, more RAM, digital drive control, and A/D inputs!

KPC-3 Plus This compact, low current TNC has become the work horse of packet radio today. It features multiple packet connects, digipeating for APRS operations, WEFAX reception, a GPS mode for tracking, personal packet mailbox, and more.

KPC-9612 Plus This TNC is the rapid delivery model, supporting 9600 baud and featuring both 1200 and 9600 packet ports, advanced APRS digipeating (APRS is a trademark of Bob Bruninga), optional (K-Net) networking, amateur beeper (paging), and more.

KAM'98 This great-grandson of the UTU features numerous outstanding modes and functions including CW, RTTY, AMTOR, Pactor, and G-TOR for HF digital operations. It also provides programmable MARK and SPACE tones, bargraph tuning for HF Ops, packet operation at both 300 and 1200 baud and a mailbox similar to the KPC-3 Plus. It's a great fit with the new 160M to 2M rigs, and it supports GPS operations.

GPS Tracker The Tracker combines a Garmin X12 GPS module, active antenna, and a KPC-3 Plus in a single package. For simultaneous tracking and two-way packet Ops, just connect the transceiver to one end and a laptop computer to the other.

Kantronics

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DAVIS Weather Stations

Gives Wind Direction & Speed, Temperature, Rain & Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC – remote with Modem Interface. Central Junction Box for Easy Hook-up, Modular Design. Perfect for NOAA Weather Monitoring Stations.

7440 Weather Monitor II®
Top-of-the-line personal weather station combines all weather monitoring function and 12 or 24 hour clock with date into one package. Shows them on an easy-to-read, back lit, 1⅞" x 4⅜" LCD display. **Temperature:** Outside, –50 to 140°F; Indoor, 32° to 140°F **Wind:** Direction in 1° or 10° increments • Speed to 175 mph • High wind speed and Wind chill to –134°F • Low wind chill **Barometer:** Barometric pressure with memory recall and trend arrow **Humidity:** Inside humidity 10%-90% (outside optional) • High and low humidity **Alarms:** Temperature, wind speed, wind chill, humidity, and time • Barometric trend alarm for change >.02, .04, or .06" of mercury/hour. **Other Features:** Scans selected functions • 115VAC • Battery back-up • Desk, shelf or wall • Size: 5¼" x 5⅞" x 3" ... **$349.95**

7859 External Temperature & Humidity Sensor
For the 7440; measure outside humidity, dew point & temperature. Comes with 40' cable..... **$109.95**

7425 Weather Wizard III®
Monitor both indoor and outdoor weather conditions at the touch of a button on the 1⅞" x 4⅜" LCD display. With the optional Rain Collector, measure daily and accumulated rainfall. Optional WeatherLink software will process and store weather data through an IBM® compatible PC or Mac®. With anemometer, external temperature sensor, junction box, cables and AC adapter. **Temperature:** Indoor, 32°F to 140°F • Outdoor, –50° to 140°F • High and low temperature. **Wind:** Direction in 1° or 10° increments • Speeds to 175 mph • High wind speed • Wind chill to –134°F • Low wind chill. **Alarms:** Temp. • Wind speed • Wind chill • Time. **Other:** Compact, 5¼" x 5⅞" x 3" • Scans selected functions • Metric or U.S units • 115V AC • Battery back-up • Desk, shelf or wall..... **$169.95**

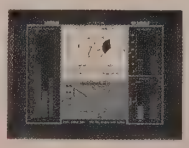
7852 Rain Collector II For 7440, 7425 & 7415; read both daily and accumulated rainfall in 0.01" increments. Comes with 40 ft. cable..... **$69.95**

7400 Perception II®
Monitors indoor climate, looks similar to Weather Wizard III. **Functions:** Temperature 32°F–140°F High/low temperature • Barometric pressure w/memory recall • Humidity • Highs & lows recorded with time & date • **Alarms:** Temperature, humidity, time, barometric change >.02, .04, or .06 inches of Hg/hr • 12/24 hr clock with date • Backlit display . **$129.95**

40 ft. Extension Cables
7876 4-conductor, for anemometer, ext. temp. sensor, rain collector, or WeatherLink..... **$18.95**
7878 6-conductor, for use with the external temperature and humidity Sensors, only **$22.95**

0281 Wind Wizard™
Wind Speed Indicator
Handheld unit accurately measures wind speed from 0-60 MPH. No batteries required..... **$46.95**

WEATHERLINK®
Software for Windows



Link Perception, Weather Wizard, or Weather Monitor to your computer. Create graphs, calculate average conditions, generate summaries, analyze trends, more.

See DAVIS in the Price Guide

MIDLAND

74-109
WEATHER MAX *PLUS*
Weather/All Hazard VHF Radio

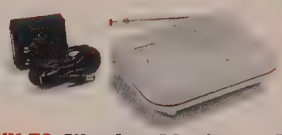
Around-the-clock, up-to-the-minute weather and "hazardous conditions" information

Equipped with all 7 N.O.A.A. channels in the 162 MHz range for max. reception of local weather reports & bulletins for hazardous conditions (i.e., fire, toxic spills, earthquakes, radiation leaks, etc.)

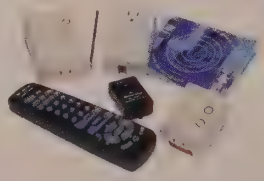
In the event of severe weather or any type of hazardous situation, a warning signal is broadcast by N.O.A.A. & the radio's "alert" is automatically activated – sounding a 90 decibel siren, a voice warning or flashing a red LED alert. There is also accessory jack for keying add-on external alert devices such as strobe lights, pillow vibrators, buzzers, etc.

Plugs into a standard 120 VAC outlet. Built-in jack permits powering from any 12 VDC vehicle. With its 9V batt. backup system, it operates during power outages or outdoors. 1⅜"h x 6¼"w x 4¾"d **$39.95**

maxon SYSTEMS Weather Monitor



WX-70 Weather Monitor • Receive up-to-the-min. National Weather Service broadcasts of local weather conditions for the United States, Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands. Covers all seven N.O.A.A frequencies: 162.550, 162.400, 162.425, 162.475, 162.450, 162.500, and 162.525 MHz. Three different severe weather "Alert" warning modes: "Voice", 10 Second Siren; or Flashing LED. Supplied 110V AC adapter, uses a 9V battery for back-up power in the event of an electrical outage. 5¾"w x 4¾"d x 1½"h, 13 oz **$39.95**



X-10, a leader in the field of wireless home security and home automation to protect your family and your electronic equipment!

Home security will monitor doors and motion sensors can cover wide areas in or around your house. You can even have the system call a friend or neighbor if its activated. You can ward off potential problems with the sound of REX. Rex is a fierce sounding electronic barking dog.

Home automation is here now and X-10 provides it! Hot coffee automatically in the morning, turn lights on/off automatically or at the push of one button. Turn the heat up and down. Set it up to run from your PC! & more!

PRICED NEAR COST!

See X-10 in the Price Guide

Radios that generate their own power! – no batteries or external power needed. Perfect for activities, emergencies, power outages. Inside, the *Freeplay Generator,* a wind-up B-motor carbon steel spring drives a generator thru a transmission to produce operating voltage. A short wind-up yields up to an hour of free listening, depending on model and volume. Built-in antenna, external power & headphone jacks.

FPR-2 (right) AM & FM broadcast band coverage. Wind-up provides 60 minutes of operation. 8"h x 11½"w x 8"d, 5 lbs, 5 oz **$69.95**

FPR-1B (left) AM & FM broadcast plus 5.8 –18MHz. Wind-up gives 30 minutes of operation. 10"h x 13½ "w x 5½ "d, 6 lbs, 3 oz..... **CLOSEOUT $69.95**

AC APAPTER for BayGen FPR-2 only **$10.95**
HEADPHONES for BayGen FPR-2 only..... **$14.95**

Solar Powered Radio

Same as FPR-2 above, with the addition of a solar panel that powers the radio when exposed to sunlight. It powers off of the solar panel alone in direct sunlight, but as light decreases, the radio automatically draws from the spring generating mechanism. The clear plastic case shows off the works

FPR-2SC $79.95 • FPR-2SM same, gray case **$79.95**

***New!* Freeplay® 360**

Covers AM & FM Broadcast bands and 5 to 18MHz. Just 60 turns provides full energy storage. New spring technology – can be rewound without interrupting radio reception. The solar panel will fully power the S360 all day in direct sunlight. With its internal power storage system, the S360 will automatically save all available spring and solar energy giving 15 hours of playtime when fully charged; can also be charged though an AC/DC wall adapter. Two models: clear or blue plastic case, shows off the works.

S360-BL blue **$69.95 • S360-C** clear **$69.95**

***New!* Freeplay® GLOBAL SHORTWAVE**

Covers AM & FM broadcast band and 5 to 18MHz. Plays for up to an hour under spring power alone after a short wind. With its solar panel, the radio will save spring power by switching automatically to make use of all available light. It will play all day in direct sunlight and it can also be powered by an optional AC/DC adapter..... **FPR-2SGSW $99.95**

Freeplay® Lantern

A self-powered light that works off of its own internal generator or rechargeable battery. Each 30 second wind of the spring engine provides a minimum of 3 minutes of light in "on" position or charges its battery in "charge" position. Includes a 1 Hz flasher unit (1 second on, 1 second off). Battery mode gives 2 hours of light. It has an auxiliary power socket providing 3V DC @ 350mA. Bright, high pressure Xenon bulb. Weather resistant, made of nylon and reinforced materials. 7" x 10" x 5½", 4 lb. 7 oz..... **BAY FP-SL $69.95**

SONY

Emergency AM/FM Radio
Turning generator handle (charging) for one minute. provides 30 minutes listening time. Also operates with 2 "AA" batteries. Includes Emergency guide light and Audio beacon Orange color stands out amidst foliage and makes location easy. Water-resistant. Headphone jack. 3⅜"x 6⅜"x 2½, 11½ oz **$79.95**

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Monitors 24-hr weather forecasts and alerts • Scans all NOAA channels • Monitors U.S. emergency alert system with auto activation
• Dual LED power/alert indicator
• Digital clock land alarm w/snooze

WR-8800 Pocket-sized • Ambient temperature display • Freeze alert audible/visual warning • LCD screen with backlighting • Water-resistant case with compass • Built-in desktop stand with power supply • Uses 3 "AA" batteries, not included • 2½"w x 1"d x 6½"h, 8 oz..... **$59.95**

WR-102 Portable S.A.M.E. Weather Radio A handheld all-hazards weather radio that receives and displays alerts, watches and warnings that apply only to your local area. Uses the latest S.A.M.E. (Specific area Messaging Encoding) technology..... **$69.95**

WR-3300 Desktop/Bedside • Operates on 3 "C" batteries (not included) or with included AC power adapter • Large digital clock LCD • Wall mount/desktop • 5"l x 4"w x 2"h, 6 oz **$39.95**

PE-319 Pedometer with Personal Security Stay at ease while exercising away at home. This pedometer features a 120dB panic alarm for personal security and emergency. Displays elapsed workout time, distance walked and a 12 or 24 hour clock on its backlit two line LCD display..... **$29.99**

WMR-918 Cable Free™ Weather Station Innovative wireless outdoor sensors operate on solar power for simple installation and sophisticated ease. Track and record over 20 separate weather conditions selected by a press of the touch-sensitive jumbo LCD display screen **$329.95**

WM-918 Complete Weather Monitoring Station Monitors over 20 weather and environmental conditions. Comes with with all wiring and accessories: Self-dumping electronic rain gauge; outdoor temperature and humidity sensor and anemometer for wind speed and direction. Desktop control panel displays clock, calendar, alarm, and weather readings. Also features weather forecasting system with prediction icons displaying local 12 and 24 hour forecasts. PC connections with optional kit. Uses 8 AAA batteries, AC adapter included. 7"l x 4¼"w x 1½"h, 14.8 oz **$199.95**

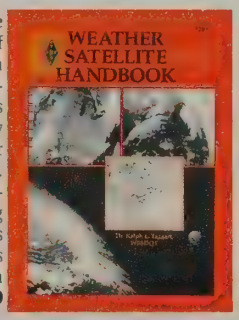
SW-918 PC software and cable; WM-918.... **$29.95**

RM-116E Exactset™ Radio Controlled Clock The most accurate of alarm clocks. Sets itself automatically by receiving time signals from the U.S. Atomic Clock. Features blue HiGlo™ backlight LCD, snooze, day/month/seconds and auto adjust for Daylight Savings Time **$39.95**

BA-812E The Weather Clock Unique bedside or desktop alarm clock features automatic weather forecasting technology with easy-to-understand graphical weather icons. Displays the indoor room temperature and features a HiGlo™ backlight LCD **$49.95**

JM-818WFA Wide-screen Exactset™ Weather Clock Easily seen from across the room, this jumbo clock features automatic local weather predictions with graphical icons and indoor temperature. Receives the time, day, and date from the U.S. Atomic Clock..... **$89.95**

ARRL Weather Satellite Handbook • Types of satellites currently in orbit and how they operate • The types of images available to you • How to buy or build weather satellite receivers & ant. • How to build an affordable interface allowing you to view images received from satellites or shortwave WEFAX on a PC ..... ARR 342 **$20**



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For reliable station power, come to the experts!

NEW!

DM-330MV Communications Grade Switching Power Supply

Tiny, powerful, 30A continuous, 32A peak output, weighs less than 5 lbs! Variable output 5 ~ 15 VDC, memory output, rear panel high-current (30A) terminals, triple circuit protection, illuminated V/A meter, ultra-quiet with patent-pending noise-shift circuit. Front panel cigar (10A) and quick-connect (5A) terminals, ripple less than 15mV p-p. Perfect for travel, station or test bench use. There's no switching supply like it!

DM-340MV IC Regulated Power Supply

30A nominal, 35A peak output. Variable output 0 ~ 15 VDC, convenient front-panel connections includes high-current terminals, cigar lighter (10A) and quick-connect (5A). Built-in circuit protection, convenient front-panel fuse. Reliable performer, proven design.

ANTENNA TUNERS

EDX-1 (not pictured) manual antenna tuner.

Works with any HF radio up to 150 w output, illuminated Power/SWR meter, accepts PL-259 connector.

EDX-2 Automatic wire antenna Tuner

Tunes random length wires from 9 to 80 feet. Compatible with DX-70 and DX-77 HF radios. Made for outdoor mounting, use at home, mobile or marine. Outputs to antenna wire (no coax output).

DJ-X10T Multimode Wide Range Receiver

100 KHz ~ 2 GHz (cellular blocked), 1200 memories, alpha numeric display, Channel Scope™ receives WFM, NFM, USB, LSB, AM and CW. Internal HELP function, much more! (DJ X10K export version available)

DJ-S46 UHF Family Radio Service Transceiver

No license required! 14 channels, FM clarity, Ni-Cd battery and charger, also operates on AA cells. Optional speaker mics and external power adapter available too! Shares accessories with DJ-S11 and DJ-S46.

Simple ▪ Clean ▪ Dependable

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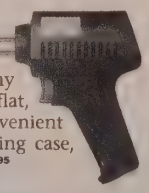
WELLER Solder Equipment

W-60P 60-W Pencil-type Soldering Iron For most circuit work. Supplied with 1/16" 700°F screw-driver tip. 7½" long, 2½ oz., 6 ft. cord, 120V..... **$62.95**

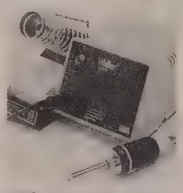
WP-25 25W Pencil-type Soldering Iron For work on delicate electronic circuits. 750°F tip temperature. 7⅞" long, 1¾ oz., 4 ft. cord, 120V AC **$32.95**

WSTA3 Pyropen® Butane Soldering Iron Lightweight & completely portable. Operates for up to three hours on a charge of regular cigarette lighter butane. Soldering temperature control is adjustable from 392° to 932°F, with a very fast heat-up time. It's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing.... **$99.95**

WST2 Pyropen® Jr. A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. The soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Has handy pocket clip **$86.95**



7200PK Soldering Gun Compact, lightweight, 75 watts for bigger work. Handles connectors and almost any other heavier soldering job. The flat, self-supporting back acts as a convenient rest when not in use. With Carrying case, extra tip and solder. 120VAC.. **$27.95**



WTCPT Controlled Output Soldering Station This pencil iron is safe for soldering ICs. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip & cleaning sponge . **$119.95**

EC-1002-1 Soldering Station Compact. Soldering pencil stand connects to right or left side of unit. Variable temperature, indicator light, self feeding reservoir with cleaning sponge. Tray stores extra temperature sensing tips ... **$199.95**

WAHL

7740 Cordless Soldering Iron Provides tip performance up to 50 watts & over 700°. Contains premium nicad rechargeable battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours, with a complete recharge in 3 to 4½ hours. Replaceable battery and worklight. Comes with recharging stand, fine & heavy tips **$47.95**

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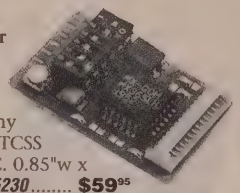
for clean, late model SSB & FM Gear. Trade-in value depends on electrical and physical condition - determined by Service Dept. examination. Call *Toll Free* for our Quote Today!

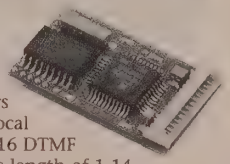
NORCOMM™ TONE SIGNALLING

NC-101 Encoder Micro-mini. CTCSS encoder, field tunable to any of the CTCSS tone frequencies between 67Hz to 254Hz. 5 to 15VDC. 0.60"w x 0.80"l x 0.15"h *NorFax™ #5040*..... **$19.95**

NC-104 Programmable Encoder Sub-mini., field programmable CTCSS encoder unit for limited space. Provides standard 37 EIA CTCSS tones + 69.37, 97.4 & 205.5Hz. 7 to 24VDC. 0.625"w x 0.80"l x 0.170"d *NorFax™ #5150*..... **$24.95**



NC-106 Programmable CTCSS Encoder/Decoder A sub-miniature crystal-controlled digital unit. Field programmable with dip switches providing any one of the standard 37 CTCSS tones + 97.4Hz. 6-24VDC. 0.85"w x 1.35"l x 0.28"h *NorFax™ #5230*..... **$59.95**

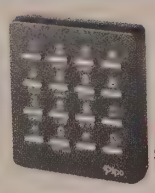


NC-401 Touch-Tone® Decoder Unique micro-mini. unit combining two distinct multi-addressable decoders for control of remote or local applications. Decodes all 16 DTMF characters with an address length of 1-14 characters and features E²PROM memory for storage of both primary and secondary codes, input/output functions, deadbeat disable and user outputs, plus default reset. Programming easily performed by means of a conventional DTMF encoder. 6-24V DC. 0.80"w x 1.37"l x 0.23"h. *NorFax™ #5545*..... **$59.95**

More Info: *Call the NorFax™ automated 24-hr. fax retrieval system – 530-477-8403*

PIPO Communications High Quality DTMF Encoders

PK-1 **$71.95**



PK-2 **$76.95**

- 12-digit or 16-digit pads
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained
- NO RFI
- Simple 3-wire connection
- 2.65"h x 2"w x .045" (PK-1)
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic
- 2.65"h x 2.5"w x .045"(PK-2)

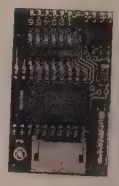
K-Series option: features a built-in keying circuit & relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for 0–3 seconds, time is adjustable with a trimpot.

PK-1K $78.95 – PK-2K $83.95

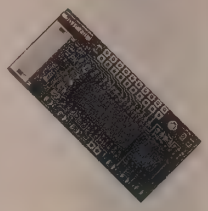
M-Series option: a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. Consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.

PK-1M $71.95 – PK-2M $76.95

CSI COMMUNICATIONS SPECIALISTS, INC. Tone Encoders & Decoders

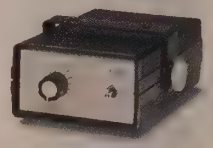


SS-64 Programmable CTCSS Encoder Super small for easy install. in most HTs. Standard with 64 EIA tones between 33 & 254.1Hz. Individual tones dip-switch selectable 0.66" x 1.08" x 0.21", requires 6–28 VDC..... **$28.95**

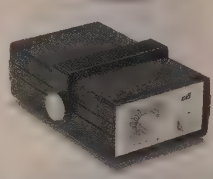


TS-64DS Field programmable CTCSS Encoder-Decoder DIP switch programmable for 64 EIA tones 33-254.1Hz. 1¼" x 2", 0.3", 6–28 VDC.... **$57.95**

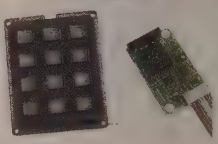
DTD-1 DTMF Decoder Small, high quality, low cost. Decodes any one of 5,040 4-digit codes to provide a latched or momentary open collector output for single function operations. 1¼ " x 2" x 0.4", requires 7–16 VDC..... **$49.95**



TE-32 Multi-tone Encoder Provides direct access from a front dial rotary switch to all EIA CTCSS tones from 67.0 to 203.5Hz, allowing users to access various repeaters Great for mobile or test bench. 5¼" x 3.3" x 1.7", 6–30 VDC.. **$49.95**



TE-64 Multi-purpose Encoder Provides 64 tone frequencies. Includes 32 subaudible, 19 burst-tone, 8 Touch-Tone® & 5 test freq. Separate outputs for high & low freq. ranges. 5¼" 3.3" x 1.7", 6–30 VDC **$79.95**



ID-8 Multi-Featured Automatic Morse ID'er Programmable via 12-button pad. Eight changeable messages, 200 characters total. CW speed: 1-99 wpm; ID interval timing: 1-99 min.; ID hold-off timing: 0-99 seconds; CW tone: 100-3000Hz. Board: 1.85" x 1.12" x .0.35"... **$69.95**

Many of the wiring diagrams for installing ConmSpec units in older Ham equipment are available as PDF documents at **www.com-spec.com.** Also posted is a six-page list of documents that can be obtained from their *Fax-on Demand* system.

CSI® CONNECT SYSTEMS INC.

CD-2 Communications Decoder Unit When mobile, the CSI CD-2 makes it easy for you to use open repeaters & autopatches because it decodes and displays any CTCSS, DCS or DTMF codes other amateurs are using on the channel. When at the base, the RS-232 port exports all decoded CTCSS/DCS or DTMF data to your PC allowing use of CD-2P software. Maintains a history of CTCSS/DCS/DTMF data from the CD-2 occurring on the channel being monitored, creates usage graphs, etc. PC/DOS based. 12 – 15 VDC. 4.9"w x 4.5"d x 1.9"h, 1 lb **$249.95**

CD-2P PC Program for CD-2 ..... **$99.95**

For additional information you may contact CSI at:
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e-mail: sales@connectsystems.com
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DJ-V5TH 2m/440 HT* NEW!

NEW! Extended Rx from 76 ~ 999 MHz‡ includes wide band FM, alphanumeric display, 200 Memories, CTCSS encode+decode, 5 watts output, compact size, 4 scan modes, 5 scan banks, cross-band operation for satellite, auto-dialer, 13.8 VDC direct input and more!

DJ-195T 2m HT NEW!

NEW! Alphanumeric display, 40 memories, CTCSS encode+decode, DCS, auto-dialer, burglar alarm, 13.8 VDC direct input, experimental mosquito repel tone! Comes with 5W battery!

DJ-180TH (144 MHz)*, DJ-280TH (222 MHz)*, DJ-480T (440 MHz)

Proven performers, super value! 10 memories expandable to 50 or 200, illuminated display.

DJ-C5T 2m/440 "Credit Card" HT

"Credit Card" size, internal speaker, 50 memories, CTCSS encode+decode, AM airband RX, 300 mw output, soft case, 600 mAh lithium-ion battery, desk charger included!

DJ-S11T (144 MHz), DJ-S41T (440 MHz) HT

"Pager size", 21 memories, easy to operate and program, great TX and RX audio, self-storing pivot antenna, uses AA batteries, 340 mw output, fits in pocket or purse. Amazing low price!

DJ-G5TH 2m+440 HT*

Our most popular dual-bander, up to 5 watts output, Channel Scope™ display, 100 memories/band, CTCSS encode+decode, AM airband RX, programmable second PTT, full duplex and crossband repeater capabilities, 13.8 VDC direct input, illuminated keys and display, RF attenuator and more!

DJ-191TH 2m HT*

Slim design with 40 memories, huge illuminated display, easy to program, 13.8 VDC direct input, auto-dialer, direct frequency entry, CTCSS encode, decode optional.

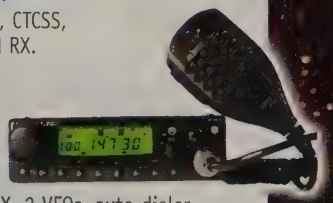
***Optional 2 watt batteries available.**

DR-M03SX (10m/10 watts) DR-M06TH(6m/20 watts) DR-430TQ (440 MHz/35 watts) FM Mobile/Base

Local and DX FM communications can be yours! Great for simplex or repeater operations, includes CTCSS encode (decode optional), 100 memories. (DR-430–20 memories; CTCSS decode included)

DR-140TQ (CTCSS decode) DR-140TPKT (for Packet) 2m FM Mobile/Base

Full power, low cost! Alphanumeric display, CTCSS, 50 watts output, 51 memories, AM airband RX.



DR-150TQ (CTCSS decode) 2m FM Mobile/Base

Channel Scope™ display, 50 watts, 100 memories, airband + 440 ~ 450 MHz RX, 2 VFOs, auto-dialer, 9600 packet port, CTCSS. For demanding 2m FM operators. Direct frequency entry from keypad.

DR-605TQ (CTCSS decode) 2m/440 Mobile/Base

Value Leader! 50 watts VHF/35 watts UHF, 51 memories/band, 430 ~ 449.995 MHz range allows for satellite work, internal duplexer, 9600 packet port. Check the super low price! Dual band, dual RX.

DR-610TQ (CTCSS decode) 2m/440 Mobile/Base

50 watts VHF/35 watts UHF, Channel Scope™ Display, 120 memories, detachable face, 2 VFOs, AM airband RX, V/U, V/V, U/U, U/V operation, RF attenuator, CTCSS, more! Direct frequency entry from keypad.

DX-70TH (100w) HF+6m Mobile/Base/Portable

160 ~ 6m Amateur band TX in all modes, general coverage RX from 150 KHz ~ 30 MHz and 50 ~ 54 MHz. 2 VFOs, 100 memories, removable face, speech compressor, SSB, CW and AM narrow filters, full, semi or automatic break-in, multi-function control, and MUCH more! Ask about optional EDX-1 or EDX-2 antenna tuners.

DX-77T HF Base/Portable

Clean, crisp RF modulation, easy to operate! Low noise floor from DDS. 160 ~ 10m Amateur band TX in all modes. 500 KHz ~ 30 MHz general coverage RX, 2 VFOs, internal keyer (6 ~ 50 wpm), 100 memories, 13.8 VDC input, speechcompressor, front-mounted speaker, RIT, easy split operation, compatible with EDX-1 or EDX-2 antenna tuners.

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Enter ICOM's Connect 2000 monthly giveaway and you could win a new IC-2800H or IC-706MKIIG. It's easy! Once a month, ICOM will post a question on its Website, at authorized ICOM dealers, in the ICOM Funmobile, and at ICOM attended ham events. Your job is to find the correct answer and mail it in. Once a month, ICOM will select at random one correctly answered entry and reward the sender with that month's new radio. Visit AES or the ICOM America Website for complete rules. No purchase necessary. Void where prohibited. Contest ends 3/31/00.

IC-706 SERIES

The most versatile series of compact, multi-band ham rigs ever made.

IC-706MKIIG THE BEST LITTLE RIG GETS EVEN BETTER

PROVEN PERFORMANCE

- HF/6M/2M – and now, 440MHz
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- Easy-to-navigate menus
- Auto repeater
- CTCSS encode/decode
- Backlit keys

IC-707

IC-746

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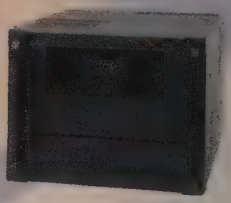
IC-756 (top), IC-775DSP (center), IC-781 (bottom)

IC-707 Extra Class Performance at a Novice Price • 100W (AM 25W) • All Mode • Simple to Use • Big, Well Spaced Keys and Dials • Large Backlit LCD Display • 500 kHz–30.0 MHz General Coverage Receiver • Full Duty Cycle • Large, Front Facing Speaker • PC Programmable*

IC-746 HF/6M/2M • 100W • All Mode • Full Duty Cycle • Quad Conversion Receiver • IF-DSP • Front Panel Adjustable NR • Audio Peak Filter • Auto Notch Filter • 3 Optional Filter Positions • Twin Passband Tuning • 4.9" LCD/Dot Matrix Display Shows All Operating Conditions, Metering and Spectrum Scope • CW Memory Keyer • VOX • Automatic Antenna Tuner • PC Controllable*

IC-PW1 *Give your desktop station 1kW of power. Remote control head, 100% duty cycle, compact size.*



IC-756 HF/6M • 100W • All Mode • Full Duty Cycle • Quad Conversion Rx • Dual Watch • IF-DSP • Front Panel Adjustable NR • Audio Peak Filter • Auto Notch Filter • 2 Optional Filter Positions • Twin Passband Tuning • 4.9" LCD/Dot Matrix Display Shows All Operating Conditions and Spectrum Scope • CW Memory Keyer • VOX • Auto Antenna Tuner • PC Controllable*

IC-756PRO (see back cover) This new HF/6M rig pushes digital to new levels! Call AES for more details. Expected availability: early spring. This device has not yet been approved by the FCC and may not be offered for sale or purchase, or be sold or purchased, until approval of the FCC has been obtained.

IC-775DSP HF • 200W • All Mode • IF-DSP with Noise Reduction, Auto Notch, Audio Peak Filter, Manual Notch and Twin Passband Tuning • Adjustable Noise Blanker • Dual Watch • Adjustable AGC • CW Keyer • Auto Antenna Tuner • VOX • CTCSS Encoder • PC Controllable*

IC-781 The Ham's Ultimate 150W HF Rig • Features all the Bells and Whistles • Built-in Power Supply • All Mode • CRT Display with Band Scope • PC Controllable*

ICOM's SATELLITE rig, the performance proven IC-821H, has earned high praise from both the amateur press and the hams who are out there pushing the hobby's envelope.

IC-821H 2M/440MHz • All Mode • REAL Satellite & Digital Performance with Continuous Adjustable Tx Power • Sub Band Tx, Independent Rx • 9600 bps Packet Data Port • Noise Blanker & IF Shift on Main/Sub • Satellite Tracking with Doppler Correction • Compact Size

NEW IC-2800H Audio Excellence and Video Excitement • 2M/440MHz • 3" (d) TFT Color LCD Screen • NTSC External Video Input (PAL in Europe) • WFM & AM (Rx Only), FM • 50W/2M, 35W/70CM • 9600 bps Packet Data Port • V/U, U/V, Dual Band, Cross Band Repeat • Independent Band Controls • Air Band Rx† • Duplexer • Attenuator

Use the hi-visibility screen to add fast-growing visual dimensions to your hobby. Experiment!

IC-2100H Rugged 2M • 55 Watts • Easy to Use • Full Function Mic • IMD Fighter • MIL SPEC 810†† • Green/Amber LCD • Large Keys, Knobs

IC-207H Super Compact, Detachable Control Panel* • 2M/440MHz • 2M(45W)/440 MHz(35W) • Work One Band at a Time • Up to 9600 bps Packet* • Air Band RX† • MIL STD 810††

ICOM MOBILE rigs are PC programmable, crafted with a one piece, die-cast aluminum chassis, offer CTCSS encode/decode, and come with a backlit, full function hand mic.

ICOM HTs offer the best and latest features. Most are PC programmable*, offer CTCSS encode/decode, meet MIL SPEC ...and best of all, are easy to use.

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IC-T8A Easy to Use, Compact 6M/2M/440MHz Tri Bander • Wide Rx† • 5W@13.5VDC* • Ni-Mh Battery • Auto Repeater • Water Resistant

IC-W32A 2M/440MHz • 5W@9.6VDC • Easy to Use • 200 Memories • Alphanumeric Display & Paging • V/V, V/U, U/V, U/U • Backlit Keypad • Wide Rx†

NEW IC-T7H 2M/70CM • Easy to Use • Up to 6 Watts* • Air Band Rx† • Pocket Beep • Auto Repeater • Work One Band at a Time

IC-Q7A 2M/70cm Mini Size • Big Audio • 30 to 1300 MHz Rx† (Cell Blocked) • Advanced Scanning • Includes 2 "AA" Ni-Cds & Charger

IC-T22A 2M • Easy to Use • Alphanumeric Display • Wide Rx, Air Band† • 5W@13.5VDC* • 3W@9.6VDC Standard

IC-T2H 2M • Super Rugged Construction • 6W@9.6VDC • 500 mW Audio • 8 Front Panel/PC Programmable* Keys • "AA" Ni-Cds & Wall Charger Included • Very Affordable

ICOM® Connect 2000

Most ICOM rigs are PC programmable with select ICOM options

PC Ready!

ALL MIL SPEC HTs

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*Optional equipment required. Contact your AES dealer for details. †Reception guaranteed on US ham bands only. ††MIL STD 810 C/D/E for shock/vibration.

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ICOM IC-T81A

Add the Wide-Open Microwaves to Your Fun

YOU'VE GOT IT ALL. With four bands at your command, excellent audio, 124 memory channels, water resistant construction, and ICOM durability, get ready for the most fun ever!

SIMPLICITY, RIGHT OUT OF THE BOX. Function keys can be confusing. The 'T81A doesn't use any! It's so easy to use, many operators said they never needed to open the instruction manual.

LISTEN BEYOND THE HAM BANDS. Pick up incredibly clear, wide band** reception. Tune in a ball game (radio *or* TV broadcast), listen to air traffic control, or scan for police activity. Take your 'T81A everywhere!

AN EXTRA BAND, AND 1/2 THE SIZE
Compared to an older tri-band HT model of just a few years ago, the IC-T81A is smaller, offers more features, is water resistant, and adds 6 meters! The IC-T81A is more affordable, too.

IC-T81A ACTUAL SIZE*

PC Ready!

ICOM options required for PC operation:
OPC-478 Cloning cable,
CS-T81 Cloning software

WORLD'S FIRST! FOUR BANDS IN ONE HAND

SPECIFICATIONS

Transmit: ..... 6M, 2M, 440 MHz, 1.2 GHz
Receive: ..... 50-54, 74-174, 400-470, and 1240-1300 MHz**
**Reception guaranteed on US ham bands only
Mode: ..... WFM and AM (Rx only), FM
Power: ..... Up to 5 Watts @ 13.5V, 1 Watt on 1.2 GHz
Memory Channels: ..... 124 total Including 100 regular, 20 scan edges, and 4 call
Size : ..... *2.3(W) x 4.2(H) x 1.1(D) in. 58(W) x 106(H) x 28.5(D) mm.
Weight : ..... 9.9 oz /280 kg

FEATURES

- **Slim, Powerful Ni-MH Battery**
  – 4.5 Watts @ 9.8V/680 mAh (4-6 hrs)
- **Rugged ICOM Construction**
  – Die-cast aluminum chassis
  – JIS-4 water resistance rating
- **CTCSS Encode/Decode (Tone Squelch)**
  – 50 tones, pocket beep
- **DTMF Encoder, 9 Memories**
- **Multi-Function "Joystick"**
  – Easy to change bands, cruise menu options, and set modes
- **Built-in Guide Function**
- **Auto Repeater**
- **Backlit Alphanumeric Display**
  – Use a PC to name channels
- **RIT and VXO for 1.2 GHz Band**
- **Battery Voltage Indicator**
- **9 Tuning Steps** (7 for 1.2 GHz band)
- **"AA" Alkaline Battery Pack** (optional)
- **Wall Charger and Belt Clip Included**

also available:

IC-T8A

ICOM's original 3 bands in one hand compact radio is a great value. If you don't need 1.2 GHz, but still want to enjoy the best of 6M/2M/440MHz, the 'T8A is the rig for you!

ICOM's original 3 bands in one hand mini HT is easy to use! 6M/2M/440MHz. Many of the same features, and a very attractive price. Pick one up today.

ICOM SPECIAL SAVINGS IC-T8A

ICOM's 'T81A & 'T8A offer more bands for more fun. Contact AES today and get in on all the action!

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Exciting New Full Range Dual Element Low Distortion Broadcast Microphone...

Bob Heil, K9EID created this dual element microphone specifically for Full-Range, Smooth Articulate SSB audio with a Wide Audio Response. The wide response makes it really great for FM and AM operation, too.

The GOLDLINE element has a wide (60Hz to 16kHz) frequency response coupled with a 6dB midrange peak @ 2kHz which gives it excellent voice articulation, which is important for clear, understandable SSB audio. At the same time, it produces a well-balanced low end which adds a robust, broadcast quality.

It's sweet and smooth, but when the pileup or conditions get tough, and you need some extra punch, you can conveniently switch in the alternate *Heil Key Element* with an engineered response that provides Maximum Speech Power. The GOLDLINE comes equipped with the new full-range element, plus your choice of the HC-4 or HC-5 Key Element, see descriptions below.

The PTT button is a slide switch utilizing a glass-enclosed magnetic reed switch for smooth, noise free operation.

Requires CC-1 cable ($29.99), specify radio - See Price Guide

GM-4 GOLDLINE with HC-4 combination **$139.99**
GM-5 GOLDLINE with HC-5 combination **$139.99**

Use with TB-1 base or Boom/Clamp assemblies, below

New! - Microphone/Boomset Adapter for YAESU FT-100

Up to now, the FT-100 did not allow the use of any other microphone system as the microphone, touch tone audio and control data are multiplexed into one cable. With the new HEIL AD-100 modular adapter, you are able to use all of your favorite HEIL products with the FT-100..... **AD-100 $24.99**

PRO-SET & PRO-MICRO

Boomset Headphones

PRO-SET A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband is fully adjustable and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom is adjustable and folds up for storage. Single cable with with L-R receive audio to a 1/4" stereo plug and 1/8' (3.5mm) transmit audio plug.

Choose HEIL HC-4 or HC-5 microphone element, descriptions below..... **$130.95**

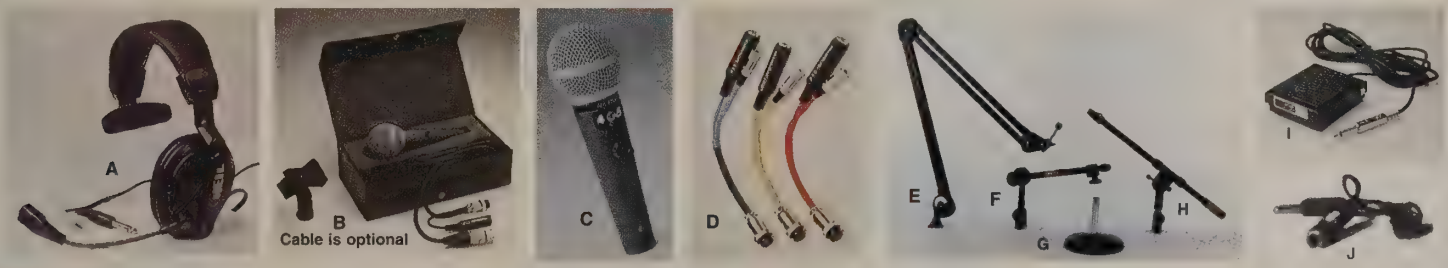
PRO-MICRO A miniature version of the PRO-SET. It's main feature besides being smaller and lighter weight is that it does not cover the entire ear which allows hearing the surroundings.

Choose HC-4 or HC-5 element, descriptions below..... **$110.95**

Adapter cable (D) for using PRO-SET or PRO-MICRO w/Icom, Kenwood, Ten-Tec, Yaesu (see price guide) .... **AD-1** ea. **$16.99**

New! - Microphone Matching Transformer

A sub-miniature audio transformer for matching Low-impedance microphones to High-impedance inputs as found in older Collins, Drake, Hallicrafters, etc. Small enough to mount inside microphone **XT-1 $15.95**



PRO 5 Boomset (A) If you are concerned about covering both ears, use the PRO-5. Its was created with all of the quality and performance as the PRO-SET without covering the right ear. Available with either the HC-4 or HC-5 microphone element, below – specify. Requires AD-1 adapter ($16.99), specify radio..... **$120.95**

HM-10 Microphone (B) A hand-held studio-style microphone with desk stand or boom mount options. Choice of HEIL cartridges. Operate PTT or VOX, it's designed to work with virtually any late model transceiver. Requires CC-1 cable ($29.99), specify radio. Also, specify HC-4 or HC-5 cartridge, below **$64.99**

HM-10 DUAL Microphone (C) Versatile in that it has both HC-4 DX element and HC-5 Full Range microphone cartridges built-in, and switch selectable for varying conditions. Requires CC-1 cable ($29.99, specify radio) **$114.99**

CC-1 CABLES (no picture) **Required for GOLDLINE or HM-10's** A 6-1/2 ft. cable with connectors to match your radio, and a PTT jack for FS-1 footswitch connection. See the Price Guide for model number to match your radio..... each **$29.99**

TB-1 Table Base (G) For HM-10 or GM series microphones. Heavy (2 lb., 10 oz) cast metal base with non-skid cork feet, 6 inches high,. **$24.99**

FS-1 Foot switch (G) Foot-control of transmitter PTT function. Non-skid pads. Supplied with 7 ft. cable and 1/4" phone plug. **$29.99**

HS-1 Hand switch (I) PTT control w/ 7 ft. cable and 1/4" phone plug. **$24.99**

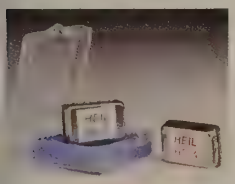
Boom and Clamp Assemblies for HM-10's and GOLDLINE

MA-1 (H) Adjustable from 6 to 24 inches and attaches to desk or shelf, or hangs from ceiling. Swivels a full 360° to place microphone where you want it. You can use the FS-1 footswitch for convenient, hands-free PTT operation **$44.99**

SB-1 (F) Extends from 9-1/2 to 16 inches. Posi-Lok clutch system with 52 locking teeth to keeps the microphone in place under any condition **$32.99**

LX-1 (E) Balanced Luxo Boom, reaches 41 inches without external springs and is balanced for microphones weighing 1 to 2 pounds. **$94.99**

www.heilsound.com



HEIL MICROPHONE CARTRIDGES

If you aren't satisfied with the *"sound of your station,"* or need better audio performance, you can solve this problem by replacing the cartridge in your microphone with a *Heil Key Element* for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

HC-4 – *The DX Dream Machine*

The replacement microphone cartridge for contest, DX and weak-signal VHF/UHF work. Outstanding results on aurora, backscatter, etc. Engineered with response where it counts – a high-pitched, pile-up busting 500–3800Hz with a 10dB peak @ 2000Hz, and a sharp 12dB per octave roll off @ 500Hz. Produces super clarity and more punch for difficult contacts. Penetrating sound, not for everyday Rag Chewing. Z: 2000Ω, works well into low to medium-Z inputs. Cardioid. Size: 0.530"d x 0.850"w x 0.310"h **$29.99**

HC-5 – *The Key Element*

The replacement microphone cartridge to eliminate the mushy, bassy, paging-type audio produced by most factory supplied mics. Makes any rig sound better and more intelligible by providing full articulation and maximum clarity. Response: 350–4000Hz, with a sharp roll-off under 300Hz and above 3100Hz, with a peak at 2100Hz. Very clear, easy-to-understand SSB audio for everyday Rag Chewing. Z: 2000Ω, works well into low to medium-Z inputs. Cardioid. Size: 0.530"d x 0.850"w x 0.310"h ... **$29.99**

Tip: Install both the HC-4 & HC-5 and switch 'em like on the HM-10 DUAL– the 5 for Show, the 4 for GO!

In-Line FET Preamplifier for ICOM Transceivers

Model HMP Designed by Bob Heil, K9EID for improving Key Element performance with ICOM transceivers

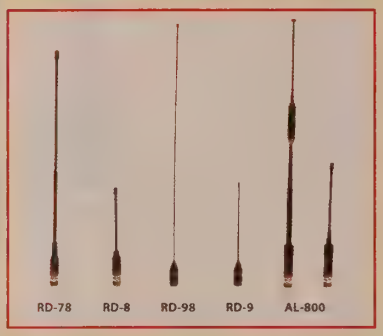
It complements the HC-4 or HC-5 by achieving the proper audio level and response for ICOM transceivers with 8dB overall gain and 4dB equalization @ 1500Hz.

The **Key Element and HMP** combination blows away the stock microphones by providing all of the benefits of the HC-4/5 as described to the left. The 6" cable with 8-pin plug connects to the into the ICOM mic input. The other end accepts the Heil CC-1/AD-1 8-pin adapters. Operational voltage is derived from the microphone input of the ICOM while passing through the push-to-talk line. **HMP-M** has a modular plug to mate to ICOM radios with modular connector...**HMP or HMP-M $54.99**

HEIL SOUND... defining the standards for amateur radio communications

PRYME®
Radio Products

HT Antennas



RD-8 - ***Rubber Duck Antenna***
Our 6.5" flexible wonder, the RD-8, will definitely improve your signal on both Two Meters and 440 MHz over any manufacturers stock duck. Scanning enthusiasts and amateur radio operators alike agree that the RD-8 offers fantastic performance at an affordable price. It has a gold plated BNC connector. Tuned for amateur band operation (144-148 / 430-450 MHz).

RD-9 / RD-9SMA - ***Thin Duck***
The RD-9 is an extremely thin, extremely flexible 7" tall rubber duck. The antenna has either a BNC or an SMA connector which is protected by a rubber moisture shield, and is molded to sit firmly on your radio's connector, preventing excessive wear and tear. Tuned for amateur band operation (144-148 / 430-450 MHz).

RD-78 - ***Extended Duck Antenna***
Our RD-78 makes significant improvement over stock, steel spring type antennas. The RD-78 is flexible, but stiff enough that it doesn't droop. Provides a solid signal with 2.15 dBi gain on VHF and 3.2 dBi gain on UHF. Gold Plated BNC connector. Tuned for amateur band operation (144-148 / 430-450 MHz).

RD-98 / RD-98SMA - ***Extended Thin Duck***
The RD-98 is a 17" dualband HT antenna that is only 1/16th of an inch in diameter. This combination of strength and gain has made the RD-98 the favorite antenna of emergency service volunteers everywhere. Tuned for amateur band operation (144-148 / 420-450 MHz).

AL-800 - ***Telescoping Antenna***
This highly popular antenna is the top of the line. Great for whenever you end up on the fringes of your favorite repeater. Telescopes to 34" or collapses to 10". You even get two antennas for the price of one -- when you are back in town, unscrew the telescoping section and replace it with the 9" rat tail section (included). Has 3.2 dBi gain on VHF and 5.5 dBi gain on UHF. Tuned for amateur band operation (144-148 / 420-450 MHz).

Speaker Mics and Audio Products

Our **SPM-200** easily secures to the user's collar, lapel, or belt with a 360° clothing clip. The microphone's and Push-To-Talk button are located in the same housing. Available either with a in-the-ear speaker (**SPM-200**) or an extra comfortable earphone with earhook (**SPM-200E**).

The **SPM-100** series speaker mics are lightweight, compact units. Features a high-quality condenser-style mic element and a powerful speaker for excellent audio clarity. Includes adjustable clip on the back of the unit that rotates up to 360°.

Now, our rubber-covered earloop earphone is available as a stand alone item. This is the same earphone that is an integrated part of our SPM-200E and SPM-400 series microphones. The **EH-1** combines comfort and privacy! Works with any radio with a 2.5 mm earphone jack

NEW!

The **SPM-600** series speaker mic is a full-sized unit with even more durable construction and a large built in speaker. Rated for a super high 500 milliwatts audio output, the '600 series provides big audio punch for use in noisy environments. The electret mic element provides great audio clarity. includes 360° rotating clothing clip.

The microphone and PTT button of the new **SPM-700** clandestine microphone kit are located in a one piece molded plastic unit that' small enough to hide in the palm of your hand. The flesh colored cord can be easily run inside clothing to keep that low profile look. Includes a flesh colored EH-1 earphone so you can listen to RXed signals in privacy.

The **SPM-500** throat mic is a great solution for operating in high noise environments. The mic housing rests comfortably against the user's throat, picking up audio directly from vocal cord vibrations. This provides outstanding background noise suppression, surprising clarity. Has a built-in, in-the-ear speaker and an in-line Push-To-Talk.

The **SPM-400** series of miniature, light-duty headsets include an in-the-ear speaker and a patented rubber-covered earloop design. It adjusts to comfortably fit either the ear of any user. Features an in-line Push-To-Talk switch that can be clipped to the user's lapel or belt.

The **PTT-1** is an optional remote PTT extension cord that plugs right into the SPM-400 series microphones. Perfect for bicycle mobile and other operations where remote PTT is needed. You can also get the PTT-1 included with a SPM-400 by ordering our new **SPM-400PT** series microphones.

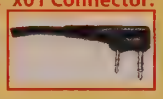
NEW!

Choosing the Right Speaker Microphone: We make a full line of speaker microphones for all major brands of amateur handheld radio. To choose the right one for your radio, refer to the drawings below. You can determine the correct model by combining the series number (shown above) and the connector number. For instance, if you want a boom mic (SPM-400 series) for a VX-5R (x02 type connector), then the model number for the microphone will be SPM-402.

x00 Connector:

for ADI, Alinco, Icom, and old style Yaesu radios

x01 Connector:



for Kenwood Ham and FRS handhelds

x02 Connector:

Icom Q7A, Yaesu FT-50, VX-1 and VX-5

x03 Connector:

Motorola Radius GP-300 style

x04 Connector:

Uniden LMR (jack on top of radio)

x04L Connector

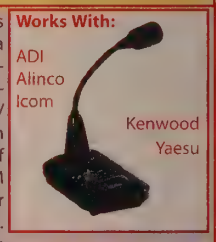
Uniden LMR (jack on side of radio)

NEW!

The **MMC-100** mobile mic is a flexible gooseneck that secures to the sun visor of your car, so it's always in place for all your ham radio mobiling. The Push-To-Talk switch for the microphone is located on an in-line box that mounts to the gear shift or arm rest, making mobile operation safer than ever. The unit is sold without a microphone cable. Cables are available to support all of today's popular HF and VHF/UHF base station and mobile radios.

The new **PMC-100** desk mic has a great-sounding element on a flexible, metal gooseneck. Features channel controls, an on-the-air LED, and momentary/locking PTT keys. An audio gain control matches the output of the mic to the radio. Use FM mode for best voice clarity, or SSB mode extra contest punch. Sold without a mic cable. Cables are available for most HF and VHF/UHF base/mobile radios.

Works With:
ADI
Alinco
Icom
Kenwood
Yaesu



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AT-600HP Dualband 2M/70CM HT

NOW! Pre-Programmed with over 100 of Gordon West, WB6NOA's favorite Ham and Public Service channels!

Gordon West WB6NOA

- Operate on simplex or repeaters, ***straight out of the box!***
- Receive police, fire, medical calls, and more, all without any programming!
- All NOAA weather channels are already pre-programmed
- Easy to change pre-programmed frequencies
- Clone to any other AT-600

Features: Tx range: 144-148, 430-450 MHz • Rx range: 108-174 MHz (including AM airband), 400-470 MHz, plus 830-985 MHz (cellular blocked) • MARS and CAP capable (permits are required) • simultaneous VHF/UHF receive • single band, or full duplex operation • crossband repeat • separate volume and squelch controls for each band • six-character alphanumeric display • 200 memories store any offset or tone • CTCSS encode *and* decode included • 10 DTMF autodialer memories for autopatch use • DTMF paging included • Auto Power Off & battery save • 5 Watts out with supplied battery (HP version only) • PC programmable • on-the-air and wired cloning • Large backlit keypad and display • Battery voltage meter function • Small! 4.25" (H) x 2" (W) x 1.5" (D) excluding battery pack

PR-52 6 Meter (50 MHz) HT
PR-222 1.35 Meter (222 MHz) HT

PR-52: Tx range: 50-54 MHz • Rx range: 44-54 MHz • ***PR-222:*** Tx range: 222-225 MHz • Rx range: 216-229 MHz

Features: 5-watts output with included NiCd battery pack • MARS and CAP capable (permits are required) • built-in CTCSS encode and decode • 40 memory channels store any tone or offset • direct frequency entry using 16 button keypad • frequency or channel display modes • PC programmable (with optional software) or cable cloneable • Palm-sized! World's Smallest 6 Meter and 1.35-Meter singleband handhelds! Size: 4.25" (H) x 2" (W) x 0.75" (D) excluding battery pack!

AT-201HP 2 Meter HT
NEW! AT-401HP 440 MHz HT

If you are looking for an powerful, easy-to-use singleband handheld our AT-201 Two Meter handheld or new AT-401 440 MHz handheld are for you! These radios offer 5-watts and have a large, backlit keypad for easy night time use.

AT-201: Tx range: 144-148 • Rx range: 130-179 MHz • **AT-401:** TX range: 430-450 MHz • Rx range: 400-470 MHz

Features: • MARS capable (permits are required) • 5-watts output with supplied battery pack (HP version only) • 40 memory channels store any offset or tone • CTCSS encode and decode included • programmable band and memory scan modes • DTMF paging included • dual frequency watch • auto-repeater offset • user selectable frequency or channel display modes • backlit display and keypad • Size: 4.25" (H) x 2" (W) x 1.3" (D) excluding battery pack

$40 Instant Coupon
AT-201HP only
ends12-31-99

AR-147 2M Mobile • AR-247 222 MHz Mobile • AR-447 70CM Mobile

The next generation of amateur single band mobile radios has arrived. These radios feature both CTCSS and DCS (Digtially Coded Squelch) encode/decode, and tone scan. DCS adds 106 new tones to the radio, in additon to the 50 standard CTCSS tones, that can be used for selective calling or repeater access.

AR-147: Tx range: 144-148 MHz • Rx range: 118-171 MHz (includes AM air) • Output: 50/15/5 watts • **AR-247:** Tx range: 222-225 MHz • Rx range: 215-229 MHz • Output: 30/15/5 watts • **AR-447:** Tx range: 430-450 MHz • Rx range: 400-470 MHz • Output: 35/15/5 watts

Features: 81 memories • CTCSS (50 tones) and **DCS** (106 tones) encode, decode, and tone scan • MARS capable (permits required) • 9 DTMF autodialer memories • Built-in redialer for autopatch use • Programmable band and memory scan • Time Out Timer • DTMF paging • Dual frequency watch • Auto Repeater Offset (AR-147 only) • Direct frequency entry using multi-function, *BACKLIT* DTMF microphone • PC programmable (with optional software) • Auto Power Off • Frequency or channel display modes • Four-step display dimmer • Power line over and under voltage protection • Small! Size: 1.5" (H) x 5.5" (W) x 6.25" (D)

NEW!

$30 Instant Coupon
AR-147/AR447 only
ends12-31-99

Win FREE ADI equipment on the web at **www.adi-radio.com**!

MFJ ENTERPRISES, INC.

396 Professional Grade Boom Microphone Headphone Designed for contesting, DXing and traffic nets. Features a *total comfort* design with superb 3/4 inch thick padding on each ear and headband. Super lightweight! – you won't even know they're there. Adjustable head gives a perfect fit, keeps out noise.

Enhanced headphone frequency response brings out speech fidelity, signals never sounded so clear.

Flexible microphone boom lets you position the microphone comfortably at an optimum distance to minimize sibilant sounds.

Tailored frequency response microphone element helps bust through noise and QRM **$79.95**

Long, 9 ft. cable with standard 1/4 inch jack for headphones and 3.5mm jack for microphone. Mic adapters: order **5396 Y/K/I** ($15.95 each.)

288 Deluxe Headset Microphone™ *(left)* Lightweight, comfortable. Superb transmit audio – picks up your voice even at a whisper. Superb earphone tonal quality and intelligibility. The foam covered microphone element is attached to the headset with a flexible rubber extension which allows proper positioning of the microphone. The small PTT switch can held or conveniently attached to your clothing. 6' of cord from headset to plug. **288I** works with ICOM, older Yaesu, Standard, ADI, Radio Shack and compatibles. **288K** works with Kenwood and compatibles. **288Y** works with Yaesu FT-10, 50 and VX transceivers .....ea. **$24.95**

292 Featherweight™ Earphone/Mic *(right)* An ear-plug earphone that fits comfortably in your ear. Tiny thumb size mic w/push-to-talk switch with lapel/pocket clip built into cord. High quality dynamic earphone & electret mic gives your hand-held crystal clear audio on receive and transmit. 4' cord. **292I** works with Icom, Yaesu, Alinco, Standard, ADI and compatibles. **292K** for Kenwood and compatibles. **292Y** works with Yaesu FT-10R, FT-40R, FT-50R and VX transceivers .....ea. **$17.95**

392 Communications Headphones Perfect for amateur radio and shortwave listening, great for all modes (SSB, FM, AM, data, CW). Superb padded headband and ear cushioned design plus lightweight (8 ounces). High-performance driver units with 100Hz-24,000Hz freq. response provide enhanced communication sound and outstanding speech fidelity. Each earphone has individual volume and bass controls. Comes with gold plated plug and 9 ft. cord. *Power handling :* 450 mW *Impedance:* 16Ω at 1 KHz *Sensitivity:* 102 dB/mW. Works in mono or stereo mode. Includes free 1/4 inch adapter **$19.95**

298I VOX Speaker/ Mic In VOX position, just talk & the mic electronic circuitry automatically keys the HT. Red LED indicates when VOX is enabled. Designed to pick up your voice, not background sound. Two condenser mics used for feedback prevention. Adjustable sensitivity for any voice and VOX "ON/OFF" switch allows use as a regular PTT speaker/mic. Includes external earphone which can be plugged into the earphone jack for private monitoring, a 360° rotating lapel clip and 54" of stretchable, coiled cord with 2-prong plug. Compatible with most Icom, Yaesu, Standard, Radio Shack, Alinco and ADI handhelds with 2-prong plug-ins..... **$39.95**

SHURE

526T Series II SUPER PUNCH® Transistorized Base Station Microphone Adjustable height, dynamic mic w/built-in preamp & output level control. Designed to replace ceramic/dynamic, high/low impedance mics originally supplied w/most equipment. 200-6,000Hz freq. response provides optimum intelligibility. Comes w/6-wire cable & triple pole double-throw locking PTT for wide range of mic to transceiver connection. Includes 9V batt **$119.95**

ASTATIC

10DA-L High-Z dynamic SSB microphone head. Controlled 300–3000Hz response provides high attenuation of the unwanted sideband and better copy through interference. 2⅞"w x 1⅛"h x ⅞"d, 17 oz. Black. Uses T-UG9 stand, below..... **$69.99**

D-104L The original *"super talk power"* microphone head. High output and 300-7500Hz response with rising characteristics between 500 and 4000 Hz, provides maximum intelligibility. Shock proof cartridge with high-Z crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille, all chrome plated. 3"diameter. x 1⅛"d, 14 oz. Uses the T-UG9 stand, below.. **$42.99**

T-UG9 Accepts D-104L and 10DA-L microphone heads. Built-in adjustable preamp with output impedance, matches most transmitters. Side switch bar for PTT w/slide-up locking clamp. 8½"h without head, 5½"dia. base. Chrome and grey, 6-wire coiled cable. Uses 9 Volt batt. **$52.95**

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KOSS stereophones

SP/5 Sidefiring Portable Stereophone in Sport Yellow Frequency Response: 40-20,000Hz • Straight, dual entry, 4' cord w/3.5mm plug • Sensitivity: 92dB SPL/1mW • Imped: 32Ω • 0.46 oz..... **$7.99**

HP/6 Portable Stereophone Freq. Response: 30-16,000Hz • Dynamic element for full sound • Foam ear cushions for open, hear-through sound • Durable headband adjusts for best fit • Volume control on cord for easy level adjustment • Straight, single entry, 4' cord with 3.5mm plug • Sensitivity: 91dB SPL/1mW • Impedance: 32Ω • 2.5 oz **$9.99**

KTX/4 Lightweight, Portable Stereophone Frequency Response: 40-20,000Hz • Collapsible design for easy storage and portability • Straight, dual entry 4' cord with 3.5/6.4mm stereo plug for home and portable use • Volume control on the cord for easy level adjustment • Sensitivity: 95dB SPL/1mW • Impedance: 32Ω • 2 oz. **$14.99**

SW/5 Dynamic Microphone Headphone Single-sided, mono headphone with dynamic microphone for hands-free communications • Frequency Response: 60-20,000Hz • Mic. Impedance: 600Ω • Headphone Impedance: 32 Ω • Adjustable, headband • Foam ear cushion for open, hear-through sound • Straight, single entry 4' cord with 3.5/6.4mm plug Sensitivity: 91dB SPL/1mW • 1.5 oz **$14.99**

SB/30 Dynamic Microphone Stereophone Stereophone with 600Ω dynamic microphone for hands-free communications • Closed, leatherette ear cushion for maximum isolation and deep bass • Frequency Response: 40-20,000Hz • Adjustable, padded headband for comfort during extended wearing periods • Straight, dual entry 8' cord with 3.5/6.4mm Sensitivity: 100dB SPL/1mW stereo phone • Impedance: 100Ω • 9.0 oz **$49.99**

QZ/99 Passive Noise Reduction Stereophone with Mono/Stereo Switch • Frequency Response: 40-20,000Hz • Coiled, single entry, 8' cord with 3.5mm/6.4mm plug • Sensitivity: 102dB SPL/1mW • Impedance: 60 Ω • 15 oz **$59.99**

QZ/2000 Noise Reduction Stereophone • Revolutionary Active Noise Reduction (ANR) stereophone system reduces harmful/annoying low frequency sounds in noisy environments >15dB SPL from 40-200Hz; average of 10dB SPL from 30-1000Hz • Frequency Response: 15-20,000Hz • Straight, dual entry, 4' cord • Includes compact control case and collapsible stereophone for convenient travel/portability • Adjustable headband • Includes input jack for audio play-through and 2-prong adapter for in-flight use • Sensitivity: 101dB SPL/1mW • Impedance: 5kΩ • Uses 2 "AA" batteries (incl.) • 2.3 oz..... **$179.95**

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High Performance Mobiles With Outstanding Audio!

Kenwood has long been known as the leader in mobile radio performance, features and value. Check them out today!

The Kenwood Tradition Continues...

KENWOOD has been known for high performance products since 1946. Kenwood mobile radios are famous for quality and dependability. Ease of operation and superior signal recognition over the air are longtime "known" Kenwood standards. Kenwood has always been known as the leader in dual-band and tri-band radio technology. Heavy-duty construction on the inside makes all Kenwood mobile radios stand up to years of shock and vibration in the toughest environments. Oversized heat sinks and high performance components make Kenwood's audio sound great even after long keydowns. Ask any Amateur service technician what radios are built the best from inside out!

TM-742AD

- 144/440 MHz + 3rd Band
- 1200/220/50 MHz Options
- Detachable 2 Piece Display/Controls
- Simultaneous Receive On All 3 Bands
- Cross Band Repeat / Remote Control

TM-V7A

- 144/440 MHz Operation
- Built-In Operation Manual
- Heavy Duty Heat Sink
- PC Programmable*
- Detachable Display & Control

TM-G707A

- 144/440 MHz Operation
- Large Alphanumeric Display
- PC programmable*
- Superior Internal Rejection
- Easy Operation

TM-261A

- 144 MHz Operation
- Mil Spec 810D Shock & Vibration
- Alphanumeric Display
- Direct Frequency Entry From Microphone
- Small Compact Design

TM-541A

- 1200 MHz Operation
- Backlit Multifunction Microphone
- Automatic Lock Tuning
- 10 Watts Power Output

TM-331A

- 220 MHz Operation
- Multi Scan Function
- 20 Programmable Memories
- Built-In Encoder

FREE Operating Manuals Via the *FTP site

VC-H1

SSTV Visual Communicator Use with any VHF/UHF/HF/FRS

KENWOOD
Amateur Radio Products Group

KENWOOD COMMUNICATIONS CORPORATION
AMATEUR RADIO PRODUCTS GROUP
P.O. Box 22745, 2201 E. Dominguez St.,
Long Beach, CA 90801-5745, U.S.A.
Customer Support/Brochures (310) 639-5300 99ARD-1927/#091099A

ISO 9001
JQA-1205
Communications Equipment Division
Kenwood Corporation
ISO9001 certification

INTERNET
Kenwood News & Products
http://www.kenwood.net
Kenwood Bulletins
*ftp://ftp.kenwood.net

Looking For DSP Performance?

Kenwood has a full line of "True" HF products ready to meet your current needs

The Kenwood Tradition Continues...

KENWOOD has been known for high performance products since 1946. Over the years, Kenwood has produced and distributed more HF Amateur radios than any other manufacturer worldwide. Beginning in the early 1970's the legendary TS-520S first appeared in the U.S.A., then other world class products followed. Over the years Kenwood has produced HF transceivers with unparalleled performance and reliability. Many of our HF models manufactured in the early 1970's are still in service today! Compare Kenwood HF audio performance against the competition. You'll understand why Kenwood is still #1 in "TRUE" HF performance.

TS-50S

- HF All Mode
- Rugged Compact Design
- Easy To Use
- Fuzzy Logic VFO
- Adjustable Power Output
- Auto Tuner Available

TS-570D(G)

- HF All Mode
- Built-In Antenna Tuner
- CW Auto Tune/Kenwood First
- 441 Combinations Of DSP Filtering
- RCP2 Computer Control*

TS-570S(G)

- HF All Mode w/6 Meters
- Built-In Antenna Tuner
- 46 Easy Menu Items
- DSP Plus SSB/CW Filter Opt.
- Voice Synthesizer Opt.

TS-870S

- HF All Mode
- True IF Stage DSP Noise Reduction
- 1st 100% Digital DSP Filtering System
- Logikey Electronic Keyer
- Built-In Antenna Tuner
- Beat Cancel

TS-950SDX

- HF All Mode
- #1 Contest HF With DSP
- Digital AF Filters
- 150 Watts Mos-Type FET Finals
- Dual Digital VFO's
- Built-In Power Supply

VC-H1

- SSTV Visual Communicator
- Use with any VHF/UHF/HF/FRS

FREE Operating Manuals Via the *FTP site

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A Handful Of Power And Performance

Kenwood HT's have outstanding audio and excellent IMD rejection. Easy to use and dependable!

The Kenwood Tradition Continues...

KENWOOD has been known for high performance products since 1946. Kenwood has a long heritage of handheld transceiver performance dating back 20 years. The TR-2400 was the first microprocessor controlled handheld, and the TH-21AT the first compact handheld of its kind ever produced. Today, Kenwood is known for its handheld models in the Amateur radio service as well as commercial radios for business/industry, police and fire depts. The new TH-D7A Data Communicator (with built-in TNC and APRS™ software, HF Sky Command and SSTV VC-H1 features) is a clear example of Kenwood's leadership in technology and design, with outstanding audio and intermodulation rejection!

TH-D7A

- 144/440 MHz Operation
- Built-In 1200/9600 TNC
- APRS™ Operating Software
- PC Programmable*
- Mil Spec 810 C/D/E
- Simultaneous Voice & Data

TH-G71A

- 144/440 MHz Operation
- PC Programmable*
- Mil Spec 810E, Water & Shock
- Wide Range Receiver
- Backlit Keypad

TH-79ARSS

- 144/440 MHz Operation
- Long Battery Life
- Built-In Operators Manual
- Alphanumeric Dot-Matrix Display
- HF Sky Command System

UBZ-LF14

- 14 FRS Channels
- Built-In CTCSS
- 2 Mile Range (Max)
- Flip Up Antenna
- Scramble Mode
- Black Finish Only

CLOSEOUT

TH-22AT

- 144 MHz Operation
- 5W
- Compact Design
- Luminescent Keypad
- Long Battery Life
- Easy To Use

VC-H1

- SSTV Visual Communicator
- Use with any VHF/UHF/HF/FRS

FREE Operating Manuals Via the *FTP site

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SG-2020 COMPACT HF SSB/CW TRANSCEIVER

SGC 05-01
$675.95

The ultimate *"take-along"* Portable!

Designed as a small, low power, low cost USB/LSB/CW HF companion for travel, where space is limited, or where only portable power is available.

Small, but fully microprocessor-controlled and loaded with *"Big Rig"* features. Take it and use it anywhere – fixed, mobile, portable, aviation or boating. Operating from 12V DC, it has the lowest current consumption on the market, drawing typically 430mA in receive & less than 3 amps at 20W CW output on transmit.

Transmit power is adjustable from 0-20W PEP output & covers 1.8 to 29.7 MHz (U.S. Ham bands only). An RF speech processor utilizing VOGAD baseband processing & RF clipping provides plenty of DX "talk-power".

The range of the General Coverage Receiver extends all the way from 400kHz to 29.7MHz for exciting wordwide reception of broadcast and shortwave stations. A back lit LCD display shows a 100Hz freq. resolution (10Hz overall res.). There are 20 Simplex or Semi-Duplex memories to store favorite operating frequencies.

Other functions and features include: SPLIT, RIT, XIT and tunable 100 to 2700Hz A.F. Bandpass. Also, a noise blanker, a fully adjustable (5 to 60 WPM) IAMBIC "B" mode keyer and convenient SWR metering and battery voltmeter. Dynamic hand microphone is included. "Smallest" portable rig, only 2.75"h x 5.9"w x 7"d, 4.4 lbs.

SG-231 Smartuner®

SGC 54-17
$529.95

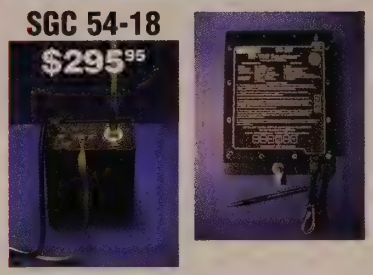
Smart, slim version of the intelligent Smartuner™

• Complete frequency agility with no operator intervention • Continuous coverage of 1 to 60MHz at 100W with almost any antenna • Compact design, fits the most restrictive installations • Weatherproof case allows mounting at antenna feed point for highest efficiency

Uses a microprocessor-controlled pi of L network to match virtually any load to your transceiver; with the SWR always 1:1.5 or better. Tuning solutions are stored in a non-volatile memory for fast (10ms) automatic recall! Operates with any HF or VHF transceiver, 3 to 100W, and requires only 12VDC and RF connections.

SG-237 Series

SGC 54-18
$295.95



100W Microprocessor-Controlled HF Antenna Coupler

The SG-237 Smartuner series is the world's smallest high performance antenna coupler for marine, aviation, commercial and amateur applications and any antenna type. The product is designed with high density surface mount components on a 4 layer PCB, providing high efficiency, reliability and performance. The standard version is fully waterproof, and the Porta PCB is mounted on a sturdy chassis plate which provides an excellent electrical and RF ground system. Rugged internal construction allows tough operation in any environment. • SG-237 PCB version (**Special Order**) - For retrofit or special projects. • SG-237 standard version - Smallest finished antenna coupler on the market. • SG-237 Porta (**Special Order**) - Can be handheld! Designed for quick mobile or base set up.

• 1.8 to 60 MHz range • Power input range 3 to 100W PEP • Waterproof • Weighs just 2 lbs. (PCB is 1.25 lbs.) • Antenna length: minimum 7 feet - 3.5 to 60 MHz, 23 feet - 1.8 to 60 MHz • Only 9L x 7W x 1.85H inches

SG-230 Smartuner®

200W Microprocessor Controlled Antenna Coupler for HF-SSB, AM, CW & DATA

You can't buy a smarter tuner. An automatic coupler so intelligent it precisely tunes any length antenna – 8 to 80 ft. in the HF band.

The Smartuner® automatically evaluates and switches 64 input & 32 output capacitance combinations, plus 256 inductance combos in a "pi" network.

The amazing result - it automatically selects from over a half-million different ways to ensure a perfect match for your transceiver.

The most intelligent feature is that the Smartuner remembers the chosen frequency and tuning values in less than 10 ms, each time you transmit on that frequency.

1.8–30 mhz range • 3–200 watts input • Tunes to 80 ft. antennas (all types) • Microprocessor controlled • 10ms tuning time • Non-volatile memory • Waterproof • 2"d x 10"w x 12"d

See Price List for selection of options and accessories for SGC Products

No Compromise Communications

MADE IN USA

SGC Inc., SGC Building,13737 S.E. 26th St. Bellevue, WA. 98005
P.O.Box 3526, 98009 **Fax:** 425-746-6384 or 746-7173
Tel: 425-746-6310 or 1-800-259-7331
World Wide Web: www.sgcworld.com

SG-2000 HF SINGLE SIDEBAND GLOBAL RADIO TELEPHONE
FULL FREQUENCY COMMUNICATIONS FOR VOICE AND DATA

Make contact anywhere with the power-packed SG-2000 – a rugged HF transceiver with 1.8 to 30MHz coverage and 150W PEP output. Engineered for simple and efficient operation, the SG-2000 features an alarm generator, upper/lower sideband, true amplitude modulated (AM) receiver and channel scan as standard features.

Talk anywhere in the world on the HF Ham bands, receive and send time sensitive documents, decode UPI transmissions, get latest weather reports or listen to shortwave broadcasts from around the world. Great for marine – highly stable & rugged.

Exceptional features include 644 factory programmed ITU voice and data frequencies plus 100 field programmable channels. Scan all ITU channels and up to 100 memory channels in adjustable scan speeds and rates. An extra large liquid crystal, wide angle display with adjustable backlighting provides easy viewing day or night.

Optionally, the SG-2000 can be fully computer controlled by any standard RS-232 protocol connector to allow easy flow and management of data communications on RTTY, ARQ (SITOR), FEC, Packet and telegraphy modes. Fast RX/TX switching time ensures easy and secure data transmissions.

The compact front panel of the SG-2000 can also act as the remote head terminal, and up to 8 full function remote heads can be utilized. The remote heads can be mounted flush with the bulkhead so they do not intrude on people space and the high-impact, abrasion and water resistant housing will stand up well in the toughest environments. The optional universal 5-way head mount orients the control head in any direction, for easy operation.

SGC 04-01
$1329.95

- Power Output: 150 watts PEP
- **Transmitter frequency range:** - 1.8 to 30 MHz
- **Receiver frequency range:** 500kHz to 30 MHz
- **Modes:** A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode & data.
- **Channels:** 100 channels field programmable, 644 channels factory programmed ITU and data.
- **Scan Channels:** Up to 100 scan channels programmable in 10 groups
- **Power Requirement:** 13.6 VDC; 0.8A RX – 16A TX (voice)
- **Size:** 4¾"h x 10"w x 15"d • **Weight:** 12 lbs

See Price List for selection of options and accessories for SGC Products

PowerTalk™ Stunning HF-SSB Receive Clarity with SGC DSP

SGC 04-10
$1849.95

With SGC's **PowerTalk™ SG-2000**, you'll intercept more weak HF signals, increase signal clarity and eliminate unwanted noise. You'll hear SSB signals clearer and easier than ever before. A true HF-SSB Power Tool!

PowerTalk™ combines the advanced receiver technology of SGC's exclusive ADSP™ (Automatic Digital Signal Processing) and SNS™ (Signal Noise Subtraction). Fast audio *and* visual tuning – a DSP command center with a high performance spinner knob & bright LED indicators.

Includes all of the outstanding features of the SG-2000: 644 Ham and ITU discrete frequencies, programmable memory, large LCD display and 150 watts of power output.

DSP HF Modem
with SmartEmailer™

Link to the world! – transmit and receive e-mail via common mode carrier or receive weather bulletins/forecasts anywhere around the globe.

Requires an HF radio with SITOR compatibility, and a laptop computer running a general purpose communications program.

Designed for digital communications or as a free-standing general-purpose processor for embedded applications. Features open hardware/software architecture running DOS and Windows applications. Works with public domain protocols or develop your own custom modem sets for advanced protocol development.

Programmable, field upgradable, easy to use graphical user interface ..... **SGC 56-40 $695.95**

QMS

QUICK MOUNT SYSTEM

for any HF-SSB mobile

- *Low profile*
- *Efficient tuning for improved mobile performance*
- *Use on any vehicle*

Add a QMS to your HF SSB mobile system - an SGC Smartuner along with an efficient whip antenna - for increased radiation and efficiency. The QMS can be installed on any small or large vehicle (sportscar, SUV or sedan) without drilling any holes or damaging the car body. Installation can be permanent or temporary and just takes 15 minutes, using industrial strength straps, buckles and 4 suction cups. Mount the QMS on the vehicle side, trunk, roof or whatever location is convenient. Most QMS systems come with a lightweight mobile antenna (either Model SG-303 or SG-307) which provide a wide frequency range and easy tuning of the Smartuner.

The SG-307 antenna is 7 ft. and the SG-303 antenna is 9 ft. - both are dual resonant whips supplied with mounting hardware. The antennas are two section with an inner core of large stainless steel rod and a layer of fiber composite helically wrapped.

The QMS™ Quick Mount Systems come in the following packages:

55-47 : QMS Quick Mount System with SG-230 antenna coupler, SG-303 9 ft. antenna, strapping elements, 4 suction cups and mounting hardware. (150W 1.6-30MHz)

55-48 : QMS Quick Mount System with SG-235 500W antenna coupler, SG-303 9 ft. antenna, strapping elements, 4 suction cups and mounting hardware. (500W 1.8-30MHz)

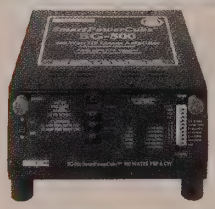
55-49 : QMS Quick Mount System with SG-231 antenna coupler, SG-307 7 ft. antenna, strapping elements, 4 suction cups and mounting hardware. (100W 1-60MHz)

55-50 : QMS Quick Mount System with SG-237 antenna coupler (100W 3.5-60MHz) (antenna not provided and any stainless steel whip can be used) **Special Order**

Description of the QMS

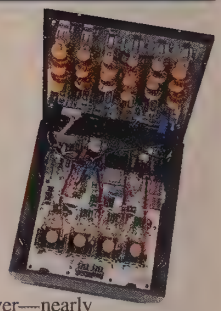
Basic Quick Universal Mount system case. Includes strapping elements and 4 suction cups to mount the SGC coupler and antenna on any vehicle. Antenna and coupler are not supplied.

BRAIN POWER



Smart PowerCube

SGC 52-96
$1169.95



Microprocessor Controlled Linear Amplifier for 1.8 to 24 MHz

The SG-500 SmartPowerCube produces tremendous power—nearly as much as a 1000W amplifier, but it requires less than one cubic foot of space.

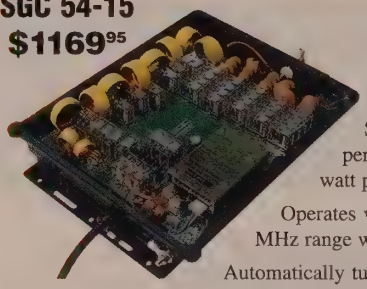
Electronic brain power makes this possible. The SG-500 is an intelligent, microprocessor-controlled high power linear amplifier, designed with high efficiency transistors. Its electronic brain constantly monitors your HF-SSB's activities, power needs, and antenna condition, and automatically—in less than 15 milliseconds—selects the right broadband filter.

Designed to perform reliably and essentially unattended, in the most demanding conditions. For maximum power – intelligent power – at low cost, the Smart Power Cube is just the amplifier for you.

• Covers: 1.8 to 24 MHz • Power Output: SSB: 500W PEP; CW: 500W for 10 minutes, no fan; 500W unlimited with fan; AM: 250W carrier maximum • Automatic bandswitching • Protection: Input overdrive, over current, over temperature • Size: 6" x 12¼ "d x 11¼"w

SG-235 Smartuner®

SGC 54-15
$1169.95



500W Microprocessor-Controlled HF Antenna Coupler

SmartTuning – now you can achieve perfect coupling to your HF rig at the 500 watt power level.

Operates with any HF transceiver from 1.8 to 30 MHz range with 3 to 500 watts output power.

Automatically tunes any length antenna from just 23 ft. long without preliminary tuning or adjustments.

The built-in microprocessor evaluates and switches 64 input and 32 output capacitance combinations plus 256 inductance combinations in a "pi" network (over a half-million possible combinations). The chosen frequency and tuning values are remembered allowing reselection of those values in less than 10 ms, each time you select that frequency. Flexibility is a key feature with its attractive options, including 24V DC.

• Microprocessor controlled • 1.8 to 30 MHz range • 3–500w input • Tunes from 23 ft. antenna at full power • Non-volatile memory • 10-mS retuning Time • Waterproof • 16d" x 12"w x 3"h inches

See Price List for selection of options and accessories for SGC Products

No Compromise Communications

MADE IN USA

SGC Inc., SGC Building,13737 S.E. 26th St. Bellevue, WA. 98005
P.O.Box 3526, 98009 **Fax:** 425-746-6384 or 746-7173
Tel: 425-746-6310 or 1-800-259-7331
World Wide Web: www.sgcworld.com

FT-1000MP
The radio of choice for world-class contest operators, the FT-1000MP provides 100 Watts of power, Enhanced DSP,™ Dual In-band Receive, Cascaded IF filters, General Coverage RX, and 160-10 M TX. (DC-only version also available.)

FT-840
Affordable yet feature filled, the FT-840 is an ideal traveling companion. It offers 160-10M TX with general coverage RX, 100 memory channels, DDS, CTCSS, Twin Band Stacking VFOs, and excellent receiver dynamic range.

FT-600 **SPECIAL ORDER**
This compact 100 Watt HF Transceiver offers the utmost in operating simplicity. The MIL-STD rated FT-600 covers the 160-10M Amateur bands with General Coverage Receive, 100 memory channels, Direct Keypad Frequency Entry, and a front-mounted speaker.

FT-1000D
Truly an elite-class HF masterpiece, the 200 Watt FT-1000D provides Dual Receive (in-band or cross-band), Cascaded IF Filters, extraordinary Dynamic Range, DDS, high-speed Automatic Antenna Tuner, and 100 memory channels.

FT-920
The FT-920 HF/6M Transceiver is designed for today's active Ham. It features high-speed DSP in all modes, 127 memory channels, AFSK or FSK Digital operation, new-technology MOSFET PA finals, high-speed Automatic Antenna Tuner, and high-resolution LCD display.

FT-100
This ultra-compact HF/VHF/UHF 100 Watt Transceiver provides SSB, CW, AM, FM and AFSK coverage of the HF, 6M, 2M and 70 CM bands. Features include 300 memory channels, built-in Electronic Memory Keyer, DSP, IF Shift, IF Noise Blanker, and CTCSS/DCS.

VL-1000/VP-1000
The VL-1000 Quadra System is a Solid-State Linear Amplifier featuring four twin-MOSFET PA modules to produce 1000 Watts of clean power output on 160-15 Meters (500 Watts on 6M, modifiable for 12/10 meters). Included are an Automatic Antenna tuner, 2 Input and 4 Output Antenna Jacks, and extensive status displays on the multi-function LCD.

FT-847
The introduction of the FT-847 completely redefines base station operation by offering three radios in one—HF, VHF/UHF and Satellite. A full power multi-mode transceiver, the appropriately named Earth Station covers the HF, 50 MHz, 144 MHz and 430 MHz bands, and it includes crossband Full Duplex operating capability for satellite work. Its exceptional receiver performance is ready for all aspects of DX work thanks to the DSP filtering. And for local FM work both CTCSS and DCS encode/decode are built in. The FT-847 is an engineering breakthrough offering you the earth, the sky, and the moon in one compact package.

THE TASK MASTERS.

They're out there. Those elusive DX signals that can't poke through the QRM regardless of the late-night hours you put in trying to find them. But when a Yaesu HF enters the picture, weak signals suddenly jump into your headphones. Yaesu's High Frequency transceiver technology uniquely combines years of RF and AF design know-how with cutting edge advancements in IF filtering, noise reduction, and dynamic range. Whether you're on high bands or low, at home or away, the high frequency technology of Yaesu's task masters quickly fills up your log with contacts. Learn more about Yaesu products on the web at www.yaesu.com

YAESU **Choice of the world's top DX'ers.**

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FT-50RD/41B
This durable, multi-featured 5 Watt Dual Bander is manufactured to rigid MIL-810 standards. Featuring wideband frequency coverage,* CTCSS/DCS operation, Dual Watch, 112 memory channels, and Digital Voice Storage.

FT-51R/HP
This full-featured 5 Watt Dual-Band Handheld includes dual receive, 120 memory channels (80 if Alphanumeric), Auto Tone Search, Spectra Scope, and V/V, U/U and V/U operation.

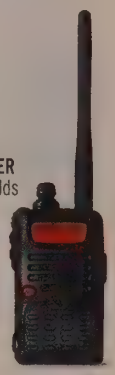
VX-1R
The pocket-sized VX-1R is small in size only. Featuring Smart Search,™ DCS/CTCSS, Dual Watch, ARTS,™ wide-band coverage (76–999* MHz plus AM BC). The VX-1R provides 291 memory channels, and puts out ½ Watt (1 Watt w/optional E-DC-15 DC Adapter).

* Cellular Blocked

FT-11R/HP **CLOSEOUT**
This compact 2M Handheld features 150 memory channels (75 if Alphanumeric), 10-memory DTMF Autodialer, Automatic Battery Saver (TX/RX), backlit Keypad, and are available in 1.5 Watt and 5 Watt versions.

FT-411E
The affordable FT-411E is compact and durable. This 5 Watt VHF FM Handheld features a die-cast case, 40 memory channels, 10 DTMF memories, built-in VOX, CTCSS, and multiple scan modes. **NOT AVAILABLE AT THIS TIME.**

FT-23R12/33R
These ultra-compact, 5 Watt VHF FM Handhelds feature rugged die-cast aluminum cases, 10 memory channels, optional CTCSS, and multiple scan modes. The FT-23R (2M) and the FT-33R (222 MHz) are easy to operate, and give outstanding performance.



FT-10/40R **SPECIAL ORDER**
These single-band handhelds are manufactured to MIL STD 810 specifications, featuring either 30 or 99 memories, CTCSS/DCS operation, Dual Watch, and are available in 2.5 Watt or 5 Watt versions, with four keypad options.

VR-500
This miniature Handheld Receiver provides FM, AM, SSB and CW reception on 100 kHz–1300 MHz, with 1091 memory channels, Smart Search,™ versatile Dot Matrix display, Band Scope, and Dual Watch.

VX-5R
Although Yaesu's newest Tri-Band Handheld Transceiver is the world's smallest, it offers the performance of a full-size unit. The VX-5R operates on the 50 MHz, 144 MHz and 430 MHz bands with 5 Watts of power output, along with ultra-wide receive coverage of the VHF and UHF spectrum, plus AM medium- and short-wave broadcast reception. The VX-5R is military rated, so its durable, lightweight design allows you to take it anywhere. It is equally suited to walking through the concrete jungle as it is to forging the raging rivers of a real one. Along with a temperature display, the optional barometer pressure sensor unit gives a read-out of barometric pressure and altitude.

TOUGH GUYS.

When you're small, you get picked on. Isn't that how it goes? Well not in Yaesu territory, because not only do we design compact handhelds for efficiency, but we give these clever little guys plenty of muscle. Yaesu handheld transceivers have earned the bragging rights for being the smallest handhelds with the most durable water resistant casings ever created. And packed inside the brawn are engineering accomplishments in performance that are unmatched in the industry. Our high-tech handheld transceivers provide clean power output on the VHF and UHF bands and offer revolutionary features that allows these tough guys to continually outperform the competition. Learn more about Yaesu products on the web at www.yaesu.com

YAESU ...leading the way.

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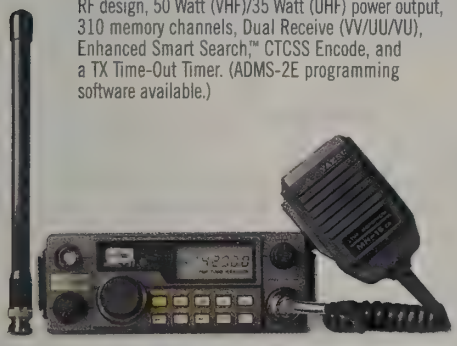
FT-8100R
The versatile FT-8100R Dual Band Mobile offers rugged RF design, 50 Watt (VHF)/35 Watt (UHF) power output, 310 memory channels, Dual Receive (VV/UU/VU), Enhanced Smart Search,™ CTCSS Encode, and a TX Time-Out Timer. (ADMS-2E programming software available.)

FT-100
This ultra-compact HF/VHF/UHF 100W Transceiver provides SSB, CW, AM, FM and AFSK coverage of the HF, 6M, 2M and 70 CM bands. Features include 300 memory channels, built-in Electronic Memory Keyer, DSP, IF Shift, IF Noise Blanker, and CTCSS/DCS.

FT-3000M
This 70W high-powered 2M FM Mobile provides extended UHF receiver coverage, AM Aircraft RX, and is MIL-STD approved. The FT-3000M features 81 memory channels, Smart Search,™ CTCSS/DCS, optional ADMS-2E programming software, and is 1200/9600 Baud Packet compatible.



FT-290RII **CLOSEOUT**
Ideal for base, vacation, or expedition use, this 25 Watt 144 MHz Multimode Transceiver is outstanding for emergency, travel, or weak-signal DX work. Optional battery pack allows over-the-shoulder portable use for search-and-rescue operation.

FT-2600M
This heavy-duty VHF FM Mobile is encased in a durable aluminum die-cast chassis/heatsink assembly, and manufactured to MIL-STD 810 requirements. Features include 60 Watt power output, 179 memory channels, direct keypad frequency entry from microphone, Alphanumeric memories, and PC programming capability with optional ADMS-2E software.

FT-90R
The new FT-90R VHF/UHF Mobile Transceiver wasn't given the name Micro Mobile for nothing. Weighing only 1.42 pounds, half the size of the competing brands, it fits almost anywhere. But don't let the size fool you. The FT-90R is one powerful Dual Band FM Transceiver. The high-performance receiver front end utilizes a GaAs MES FET device for excellent sensitivity, allowing for greater simplex range and access to distant repeaters. The adaptable Micro Mobile has programmable function keys, a high-capacity memory system and a versatile scanning system for active operation.

LITTLE BIG MOUTH.

Life is an adventure. So whether you're on expedition or vacation, you will probably encounter some rough going along the way. And when you do, you'll be glad that your mobile transceiver is a Yaesu. With units small enough to install almost anywhere and rugged enough to achieve military approval for shock and vibration, Yaesu is the obvious choice for dependability. Its exceptionally clear signal and wide dynamic range tame even the most crowded bands, and provide outstanding protection from intermodulation in urban areas. Learn more about Yaesu products on the web at www.yaesu.com

YAESU ...leading the way.

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CARRY THE WORLD WITH YOU!

Continuous Coverage:
100 kHz to 1299.99995* MHz!

*Cellular telephone frequencies are blocked and cannot be restored.

All Mode Reception:
FM, Wide-FM, USB, LSB, CW, and AM!

Huge Memory Capacity:
1091 Channels!

Ultra Compact Size!
58 mm x 24 mm x 95 mm
220 g (including Antenna / Battery)
Simulated display / keypad Illumination

Actual Size

Features

- Multiple Power Source Capability
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- Large High-Output Speaker
- Polycarbonate Case
- Real-Time 60-ch* Band Scope
  *Range 6 MHz / Step 100 kHz

- Full Illumination For Display And Keypad
- Versatile Squelch / Monitor Key
- Convenient "Preset" Operating Mode

- Huge 1091-ch Memory System With Search & Scan
  - Regular Memories (1000 ch)
  - Search Band Memories (10 ch)
  - Preset Channel Memories (19 ch +10 Weather Channels)
  - Dual Watch Memories (10 ch)
  - Priority Memory (1 ch)
  - Smart Search™ Memories (11/21/31/41 ch)

- Convenience Features
  •1 MHz Fast Steps •Front-end 20 dB Attenuator •RF Squelch •Power On / Power Off Timers • Adjustable Battery Saver •Extensive Menu Customization •Clone Capability •Computer Control

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All-Mode Wideband Receiver

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Choice of the World's top DX'ers

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MONO BAND HANDHELDS

Manufacturer Model	ALINCO DJ-180TH	ALINCO DJ-191TH	ALINCO DJ-195T	ALINCO DJ-280TH	ALINCO DJ-C1T	ALINCO DJ-C4T	ALINCO DJ-S11T	ALINCO DJ-S41T	ICOM IC-2GXAT/HP	ICOM IC-T2H	ICOM IC-T22A
Band	2 meters	2 meters	2 meters	220MHz	2 meters	440MHz	2 meters	440MHz	2 meters	2 meters	2 meters
Rx Range (MHz) (1)	137-174	135-174	135-174	220-225	118-174	420-450	144-148	425-450	144-148	136-174	136-174
Aircraft Rx	No	No	No	No	Yes	No	No	No	No	No	No
Power Output	5W	5W	5W	5W	300mW	300mW	340mW	340mW	7W	6W	3W
Touch-Tone Pad	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tone Decode	Yes	EJ-28U	Yes(4)	No	No	No	No	No	Yes	Yes	UT-94
Memories	10/50(2) /200(3)	40	40	10/50(2) /200(3)	21	21	21	21	400	40	87
Alphanumeric	No	No	Yes	No	No	No	No	No	No	No	Yes
Battery Type	Ni-Cad	Ni-Cad	Ni-cad	NI-cad	Li-ion	Li-ion	AA	AA	Ni-Cad	Ni-Cad	Ni-Cad
PC Programmable	No	No	No	No	No	No	No	No	No	Yes	No
Antenna Conn	BNC	BNC	BNC	BNC	Fixed (5)	Fixed(5)	Fixed (7)	Fixed (7)	BNC	BNC	BNC
Height (in.)	5.2	6.0	4.9	5.2	3.7	3.7	3.9	3.9	4.9	4.5	4.8
Width (in.)	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3
Depth (in.)	1.3	1.1	1.6	1.3	0.4	0.4	1.1	1.1	1.4	1.3	1.1
Weight (oz.)	12.3	12.3	13.2	12.3	2.5	2.5	2.72	2.72	12.5	14.8	10.9
Price	$149.95	$154.95 C/O	$159.95	$169.95	$69.95 C/O	$69.95 C/O	$79.95	$79.95	$229.95	$169.95	$209.95

Manufacturer Model	ADI AT-201HP	ADI AT-400HP	ADI PR-52	ADI PR-222	CHEROKEE AH-50SF	KENWOOD TH-22ATH	YAESU FT-11R/HP	YAESU FT-23R12	YAESU FT-33R	YAESU FT-911
Band	2 meters	440MHz	6 meters	220MHz	6 meters	2 meters	2 meters	2 meters	220MHz	1.2gHz
Rx Range (MHz)	130-170	430-450	44-54	216-229	50-54	136-174	110-180	144-148	220-225	1240-1300
Aircraft Rx	No	No	No	No	No	No	Yes	No	No	No
Power Output	5W	5W	5W	5W	5W	5W	5W	5W	5W	1W
Touch-Tone Pad	Yes	Yes	Yes	Yes	No	Yes	Yes	FTT-4	FTT-4	Yes
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	FTS-12	FTS-12	Yes
Tone Decode	Yes	Yes	Yes	Yes	No	TSU-8	Yes	FTS-12	FTS-12	FTS-17
Memories	40	20	40	40	5	41	151/75(6)	10	10	49
Alphanumeric	No	No	No	No	No	No	Yes	No	No	No
Battery Type	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-cad	Ni-cad	Ni-Cad
PC Programmable	No	No	Yes	Yes	No	No	No	No	No	No
Antenna Conn	BNC	BNC	TNC(1)	BNC	BNC	BNC	BNC	BNC	BNC	BNC
Height (in.)	3.3	3.3	4.25	4.25	6.0	4.6	4.0	6.1	6.1	6.1
Width (in.)	2.2	2.2	2.0	2.0	2.5	2.2	2.2	2.2	2.2	2.2
Depth (in.)	1.2	1.2	0.75	0.75	1.3	1.0	1.0	1.3	1.3	1.3
Weight (oz.)	6.6	6.6	14.5	14.5	14	10.2	9.9	17.3	17.3	19.4
Price	$149.95	$119.95 C/O	$219.95	$219.95	$149.95 C/O	$229.95	$199.95 C/O	$179.95	$299.95	$469.95

All prices after Instant Coupons. Expiration dates vary, call for details.

* Data not available
(1) TNC ant. jack commonly found on cell & commercial equip.
(2) With optional EJ-14U
(3) With optional EJ-15U
(4) Standard CTCSS plus DCS
(5) Telescoping non-removable ant. Comes w/wire receive ant.
(6) 75 with alphanumeric tags
(7) Folding ant. attached.
2m antenna - telescopic, 70cm - flexible

DUAL BAND VHF/UHF TRANSCEIVERS

Manufacturer Model	ALINCO DR-605TQ	ALINCO DR-610TQ	ICOM IC-207H	ICOM IC-2800H	KENWOOD TM-G707A	KENWOOD TM-V7A	KENWOOD TM-642AD (9)	KENWOOD TM-742AD	YAESU FT-8100R	YAESU FT-90R
Tx Range (10,13)	144-148 430-450	144-148 438-450	144-148 440-450	144-148 430-450	144-148 438-450	144-148 438-450	144-148 220-225	144-148 438-450	144-148 430-450	144-148 430-450
Rx Range (MHz) (10,13,16)	136-174 420-470	108-174 420-470 (11)	118-174 (1) 320-480 849-869 894-950	118-174 (11) 320-350	118-174 410-524 (11)	118-174 410-470 (11)	118-174 213-235 (11)	118-174 410-470 (11)	110-550 750-1330 (11)	100-230 300-530 810-1000
Single or Dual Rx	Dual	Dual	Single	Dual	Single	Dual	Dual	Dual	Dual	Single
Power (2M) Power (70CM)	50/5W 35/5W	50/10/5W 35/10/5W	50/20/10/5W 35/20/10/5W	50/20/10/5W 5/20/10/5W	50/10/5W 35/10/5W	50/10/5W 35/10/5W	50/10/5W 25/10/5W	50/10/5W 35/10/5W	50/20/5W 35/20/5W	50/20/10/5W 35/20/10W
Memories	100	120	182	232	180	280	101	101	310	186
Tone	Y	Y	Y	Y	Y	Y	Y	Y		
CTCSS	Y	Y	Y	Y	Y	Y	Optional TSU-7	Optional TSU-7	FTS22	Y/DCS
Duplexer	Y	Y	Y	Y	Y	Y	N	N	Y	Y
Cross-Band Rpt.	Y	Y	N	Y	N	Y	Y(14)	Y(14)	Y	N
Alphanumeric	Y	N	N	Y	Y	Y	N	N	N	Y
PC Programmable	N	N	Y	Y	Y	Y	N	N	Y	Y
9600b Compatible	Y	Y	Y	Y(14)	Y	Y	Y(14)	Y(14)	Y	Y
Height (in.)	1.6	1.6	1.6	2.8 (Head) 1.6 (Body)	1.6	1.6	1.9	1.9	1.6	1.2
Width (in.)	5.5	5.5	5.5	5.5 (Head) 5.5 (Body)	5.5	5.5	5.9	5.9	5.6	3.9
Depth (in) (12)	6.9	2.4	7.3	1.3 (Head) 6.5 (Body	7.4	7.4	6.9	6.9	6.4	5.4
Weight (lbs)	2.4	2.4	2.6	0.6 (Head) 2.5 (Body)	2.7	2.7	3.9	3.9	2.2	1.4
Separateable	N	Y	Y	Y (8)	Y	Y	Y	Y	Y	Y
Price	$339.95	$439.95	$339.95	$549.95	$339.95	$459.95	$739.95	$649.95	$459.95	$399.95

All prices after Instant Coupons. Expiration dates vary, call for details.

(8) CANNOT mount head to radio body
(9) 2M/220MHz Transceiver
(10) All models are Cellular Blocked
(11) AM aircraft receive mode
(12) Does not include projections (knobs, antenna jacks, etc.)
(13) Manufactuer only guarantees specs within the ham bands
(14) Requires internal modification (available on request)
(15) All radio are cell blocked

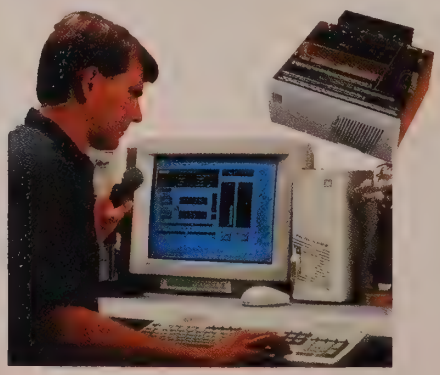
DUAL BAND HANDHELDS

Manufacturer Model	ICOM IC-Q7ABC	ICOM IC-T7H	ICOM IC-T8A/HP	ICOM TC-T81A	ICOM IC-W32A	KENWOOD TH-D7A	KENWOOD TH-G71A	KENWOOD TH-79AKSS
Tx Range (MHz)	144-148 440-450	144-148 440-450	50-54 144-148 440-450	50-54 144-148 440-450 1240-1300	144-148 440-450	144-148 430-450	144-148 430-450	144-148 438-450
Rx Range (MHz)(8)	30-1300	118-174 400-470	50-54 74-174	50-54 74-174 400-470 1240-1300	118-174 400-470	118-174 400-480	118-174 400-470	118-174 430-450(4)
Single/Dual Rx	Single	Single	Single	Single	Dual	Single (4)	Single	Dual
Aircraft Rx	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Output	350mW	6W	5W	5W(3)	5W	5W	5W	5W
Memories	200	70	123	124	200	200	200	82
CTCSS	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec
TTP	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Alphanumeric	No	No	No	No	Yes	Yes	Yes	No
PC Programmable	No	Yes	Yes	Yes	Yes	Yes	No	No
Battery Type	Ni-Cad	Ni-Cad	Ni-Mah	Ni-Mah	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad
Ant.Connector	SMA	BNC	SMA	SMA	BNC	SMA	SMA	BNC
Height (in.)	3.8	4.8	4.3	4.3	5.5	4.7	4.4	5.1
Width (in.)	2.3	2.3	2.3	2.3	2.3	2.1	2.1	2.2
Depth (in.)	1.1	1.1	1.2	1.2	1.4	1.7	1.3	1.0
Weigh (oz.)	6.4	14.3	9.9	9.9	16	13.4	11.6	11.2
Price	$179.95	$239.95	$279.95	$399.95	$299.95	$439.95	$269.95	$379.95

Manufacturer Model	ADI AT-600HP	ALINCO DJ-C5T	ALINCO DJ-G5TH	ALINCO DJ-V5TH	YAESU FT-50RD/41B	YAESU FT-51R/HP	YAESU VX-1R	YAESU VX-5R
Tx Range (MHz)	144-148 430-450	144-148 420-450	144-148 438-450	144-148 420-450	144-148 430-450	144-148 420-450	144-148 430-450	50-54 144-148 430-450
Rx Range (MHz)(8)	108-174 330-499	118-174 420-450	108-174 438-450	76-999(2)	76-200 300-540 590-999	110-180 420-470	76-999	0.5-16 48-729 800-999
Single/Dual Rx	Dual	Single	Dual	Single	Single	Dual	Single	Single
Aircraft Rx	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Output	5W	300mW	5W	6W	5W	5W	500mW (7)	5W
Memories	200 (6)	50	80/80(1)	200	112	120/80 (5)	291	220
CTCSS	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec/DCS	Enc/Dec	Enc/Dec/DCS	Enc/Dec/DCS
TTP	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Alphanumeric	Yes	No	No	Yes	Yes	Yes	Yes	Yes
PC Programmable	Yes	No	No	No	Yes	Yes	Yes	Yes
Battery Type	Ni-Cad	Li-ion	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	L-ion	Li-ion
Ant. Connector	BNC	None	BNC	SMA	SMA	BNC	SMA	SMA
Height (in.)	6.5	3.7	5.4	3.8	3.9	4.5	3.2	4.1
Width (in.)	2	2.2	2.2	2.3	2.3	2.3	1.9	2.4
Depth (in.)	1.5	0.4	1.1	1.3	1.2	4	1	1.3
Weigh (oz.)	15.5	3.2	12.8	12	11.5	16	4	10
Price	$259.95	$149.95	$279.95	$239.95	$269.95	$379.95 C/O	$199.95	$359.95

All prices after Instant Coupons. Expiration dates vary, call for details.

(1) 80 memory channels per side
(2) Requires simple internal modification
(3) 1W on 1.2 gHz
(4) Dual operation between Voice & Data
(5) 80 using alphanumeric
(6) 120 Alphanumeric
(7) 1W with wall cube or cigarette adapter
(8) All radios are cell blocked



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Covers 160 thru 10 meter amateur bands on transmit and from 0.1 to 30 MHz with its general coverage receiver. Power output is 100 watts SSB/CW and 25 watts AM. Built-in 5-80 WPM CW keyer. Totally PC controlled under Windows 3.1 or Windows 95 and loaded with computerized features: 16/24 bit IF DSP processing, 1 Hz DDS tuning; built-in test and frequency calibration, band sweep display; point and click tuning; on screen Smith chart; logging software

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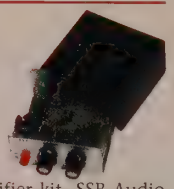

Each VECTRONICS kit features a professional quality epoxy glass PC board with solder mask and screen printed component legend, simple step-by-step instruction manual and the highest quality components. Kit assembly is easy, and they work the first time • 40M Receiver • Crystal Radio • 40M CW Transmitter • AM Radio Transmitter • TV Transmitter • Aircraft Receiver • 2M preamp • 220MHz Preamp • CW Keyer • Battery Conditioner • FM Broadcast SCA Decoder • CW Audio Filter • CW Filter/Amplifier kit SSB Audio Filter • Tunable SSB/CW Audio Filter

Selected kits in stock!... See the Price Guide under VECTRONICS

MFJ MFJ ENTERPRISES, INC.

6M SSB Adventure Radio w/mic
$249.95

Explore exotic 50MHz band openings, Tropo, Sporadic E, F2, TE, Aurora, Scatter, and more.

9406X Full CW/SSB coverage: VFO tunes 50.0 to 50.3MHz, covers CW, propagation beacons, SSB. Smooth reduction-drive analog VFO and fine-tune control makes tuning signals easy. Only 2½"h x 6½"w x 6"d. Opt. CW module & power supply.

Potent Signal: 10W PEP output. Syllabic speech processing adds up to 6dB more punch to cut through noise, fading & QRM. Incl. hand microphone is designed to complement the speech processing. Built-in 60MHz lowpass filter prevents TVI.

Hot/Selective Receiver: Crystal-mixed single-conversion superheat with low-noise preamp digs deep into the noise floor to capture weak signals. A sharp SSB ladder filter reduces QRM/passband noise.

6 meter Accessories:

416 CW module for 9406X, provides semi-QSK break-in and sidetone **$49.95**

4110 110V AC wall adapter transformer and voltage regulator for 9406X (13.6V DC out) **$49.95**

4114 Portable battery pack. Uses Ni-Cad, Alkaline, regular D cells or 110VAC. Includes charger for Ni-Cads. Fastens to 9406X **$69.95**

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MIRAGE A-1015G 6-meter 150 Watt Amplifier. Ideal for 9406X and other 6 meter (1-15 watt) FM, SSB, or CW rigs. 10W input produces 150 W output. Requires 13.8V DC @ 18-22 amps **$349.95**

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Various Features: Commercial Quality • 24 Hour Continuous Duty • AC/DC Operation • DTMF Remote Control • Programmable CW Call Sign I.D. • Time-out Timer • 5.9"h x 14.5"d x 14.5"d, 37.5 lb

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YAESU vertex

vertex FM Repeaters

- 2–25W 100% duty cycle
- 8 Channels – PLL synth.
- Optional programming kit
- CTCSS encode/decode
- Programmable features: Frequency, CTCSS, Hi/Low power, Hang timer, Time-out timer
- Wall Mount or optional 19" rack mounting kit
- DB-25 connector for accessory and 8-pin modular jack for phone line
- Modular card style unit construction • 25 lbs.
- 14-3/4" x 10-3/4" x 4-3/8"

VXR-5000UCDC 440MHz 12VDC @ 7A **$1199.95**
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Mono Band Transceivers

Manufacturer Model	ADI AR-146	ADI AR-147	ADI AR-247(3)	ADI AR-446	ALINCO AR-447	ALINCO DR-M03SX	ALINCO DR-M06TH	ALINCO DR-140TQ	ALINCO DR-150TQ	ALINCO DR-430TQ	ICOM IC-2100H
Band	2 meters	2 meters	220MHz	70 cm	70 cm	10 meters	6 meters	2 meters	2 meters	70 cm	2 meters
TX Range (MHz)	144-148	144-148	222-225	430-450	430-450	28-29.7	50-54	144-148	144-148	440-450	144-148
Rx Range (MHz)(5)	130-180	118-171	216-229	420-480	400-470	28-29.7	40-60(1)	118-174	108-174 440-450(4)	440-450	136-174
Aircraft Rx	No	Yes	N/A	No	Yes	N/A	N/A	N/A	No	No	Yes
Power Output	5/10/5W	50/15/5W	35/15/5W	35/10/5W	30/10/5W	10/1W	20/1W	50/5W	50/25/10W	35/5W	55/10/5W
TTP Microphone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tone Decode	Yes	Yes/DCS	Yes/DCS	Yes	Yes/DCS	EJ-20U	EJ-20U	Yes	Yes	Yes	Yes
Memories	40	80	80	40	80	100	100	51	100	20/80(2)	113
Alphanumeric	No	No	No	No	No	No	No	Yes	No	No	Yes
PC Programmable	No	Yes	Yes	No	Yes	N/A	N/A	N/A	No	No	Yes
13.8V DC@	12A	12A	8A	10A	10A	3A	5A	10.5A	10A	10.5A	12A
Antenna Conn	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239	SO-239
Height (in.)	1.6	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6
Width (in.)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.5	5.5	5.5
Depth (in.)	6.5	6.5	6.3	6.3	6.3	4.5	4.5	6.1	5.1	6.1	7.1
Weight (lbs.)	2.65	2.65	2.65	2.65	2.65	1.5	1.5	1.9	1.76	1.9	2.5
Price	$169.95 C/O	$169.95		$229.95 C/O	$259.95	$164.95	$249.95	$194.95	$219.95	$229.95	$199.95

Manufacturer Model	KENWOOD TM-261A	KENWOOD TM-331A	KENWOOD TM-461A	KENWOOD TM-541A	YAESU FT-2600M	YAESU FT-3000M
Band	2 meters	220MHz	70cm	1.2gHz	2 meters	2 meters
TX Range (MHz)	144-148	222-225	438-450	1240-1300	144-148	144-148
Rx Range (MHz)(5)	118-174	222-225	400-470	1240-1300	136-174	110-180 300-520 800-999
Aircraft Rx	No	No	Yes	No	Yes	Yes
Power Output	25/10/5W	25/10/5W	35/10/5W	10W	60W	70/50/25/10W
TTP Microphone	Yes	Yes	Yes	Yes	Yes	Yes
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes
Tone Decode	TSU-8	KQT-8	TSU-8	KQT-8	Yes/DCS	FTS-17A
Memories	62	20	62	20	60	81
Alphanumeric	Yes	No	Yes	No	Yes	Yes
PC Programmable	No	No	No	No	Yes	Yes
13.8V DC@	11A	6.5A	10A	6A	10A	15A
Antenna Conn	SO-239	SO-239	SO-239	Type-N	SO-239	SO-239
Height (in.)	1.6	1.7	1.7	1.57	1.6	1.5
Width (in.)	5.5	5.5	5.5	5.5	6.3	5.5
Depth (in.)	6.3	6.6	6.6	6.3	6.3	7.0
Weight (lbs.)	2.2	2.65	2.2	2.4	2.9	2.75
Price	$179.95	$499.95	$439.95	$449.95	$219.95	$399.95

All prices after Instant Coupons. Expiration dates vary, call for details.

(1) Requires keyboard modification
(2) Expanded memory requires optional EJ-19U
(3) This device has not been approved by the Federal Communications Commission. This device is not, and may not, be offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.
(4) Receive only on 70cm
(5) All radios are cell blocked

Perfect Gift for the Person with Everything!

AMATEUR ELECTRONIC SUPPLY
5710 W. GOOD HOPE ROAD.
MILWAUKEE, WISCONSIN 53223
(414) 358-0333

NO. 0000

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SAMPLE

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Gift Certificates Available For The Undecided

We have Gift Certificates and a selection of over 5,000 major items and accessories to choose from. Certificates may be purchased from our Milwaukee store by calling: **1-800-558-0411**

DRAKE TR-270

2 meter FM Base/Mobile Transceiver

Major features: Dual receiver oper. with 2 VFOs per receiver and independent volume and squelch controls; High dynamic range front end; Freq. tuning via tuning wheel, up/down buttons, or direct keypad entry; Multiple scan func; Pre-programmed operating parameters with customizable settings; RS232C interface; 3 power output levels; Switchable IF filters. Total integration of FM voice, packet, satellite, and weather fax – ACARS data reception possible with opt. TNC270 and DEMOD270 (200 additional memories in weather satellite and satellite modes).

DTMF encoding and dialer; CTCSS encode/decode; Built-in switching power supply; External DC input for mobile or emergency operation **$549.95**

Transmit range	142 to 150 MHz
Extended receiver range	136 to 174 MHz & 420 to 470 MHz
Maximum power output	25W
Sensitivity	0.18µV/12dB SINAD
Audio output at 8Ω	2W
Power Requirements	15/230 VAC ±10% 13.8V DC @ 8A
Dimensions	4¾"h x 11"w x 13½"d

TNC-270 Terminal node controller Plug-in controller card for TR-270 transceiver. 1200/9600 bps. Easy oper., comes with PC PakRatt™ software for Windows® and PP Lite™ software for DOS ... **$249.95**

DEMOD-270 TNC-270 accessory Provides demodulation of weather satellite transmissions, including NOAA APT, GOES & HF WEFAX (additional equipment may be required), and other facsimile signals; ACARS, Morse code and RTTY also possible .. **$99.95**

CHEROKEE

AH-50SF 6 Meter FM Transceiver 50-54 MHz coverage • Selectable offset • Backlit LCD w/function indicators • Freq. scanning scans entire 6M • Full 5W output power • Selectable 1W mode • CTCSS tone freq. for privacy • 5 program. mem. • Full normal and reverse repeater func. • Batt. power saver w/low batt. indication • Opt. MA-27 adapter for mobile oper. • 6"h x 2½"w x 1¾"d • Accessories include: flexible antenna, Ni-Cad battery pack, power adapter, battery charger, belt clip and wrist strap .....**CLOSEOUT $149.95**

HF RADIOS

Manufacturer Model	ALINCO DX-70TH	ALINCO DX-77T	ICOM IC-707	ICOM IC-706MKII	ICOM IC-706MKIIG	ICOM IC-746	ICOM IC-756	ICOM IC-775DSP	ICOM IC-781
Bands	HF, 6M	HF	HF	HF, 6M,2M	HF, 6M,2M, 70CM	HF, 6M, 2M	HF, 6M	HF	HF
Rx Range (MHz)	.15-30, 50-54	.5-30	.5-30	.5-30	.03-200, 400-470	.03-200	.03-60	.1-30	.1-30
Power (SSB/CW/FM)	100W HF/6M	10-100W	5-100W (2)	5-100 HF/6M 2-10W 2M	5-100 HF/6M 2.5-50W 2M 2-20W 70CM	5-100 HF/6M/2M	5-100 HF/6M	5-200W	150W
Power (AM)	40W HF/6M	4-40W	5-25W	2-40W HF	2-40W HF 2-20W 2M 2-8W 70CM	5-40W H/6M/2M	5-40 HF/6M	5-50W	75W
DSP	No	No	No	Yes	Yes	Yes	Yes	Yes	No
Tuner	No	No	No	No	No	Yes	Yes	Yes	Yes
Keyer	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Speech Readout	No	No	No	Optional	Optional	Optional	Optional	Optional	Optional
VOX	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Power Requirments	12VDC, 20A	12VDC, 20A	12VDC, 20A	12VDC, 20A	12VDC, 20A	12VDC, 20A	12V DC, 20A	125VAC	125V AC
Antenna ports	2 (1)	1	1	2 (3)	2 (4)	3 (5)	2	2	1
Computer Port	No	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Height (in.)	2.3	3.7	3.7	2.3	2.3	4.7	4.4	5.9	5.9
Width (in.)	7	9.8	9.5	6.6	6.6	11.3	13.4	16.7	16.1
Depth (in.)	9	9	9.4	7.9	7.9	12.5	11.2	15.4	16.2
Weight (lbs.)	6	8.4	9.1	5.5	5.5	19.5	23.1	36.8	50.7
Price	$759.95	$729.95	$649.95	$1099.95 C/O	$1399.95	$1589.95	$1999.95	$3499.95	$6999.95 (7)

Manufacturer Model	KENWOOD TS-50S	KENWOOD TS-570D(G)	KENWOOD TS-570S(G)	KENWOOD TS-870S	KENWOOD TS-950SDX	YAESU FT-840	YAESU FT-100	YAESU FT-847	YAESU FT-920	YAESU FT-1000MP	YAESU FT-1000D
Bands	HF	HF	HF, 6M	HF	HF	HF	HF, 6M, 2M, 70CM	HF, 6M, 2M, 70CM	HF, 6M	HF	HF
Rx Range (MHz)	.5-30	.5-30	.5-30, 6M	.1-30	.1-30	.1-30	.1-961(8)	.1-30, 36-76 108-174, 420-512	.1-30, 48-56	.1-30	.1-30
Power (SSB/CW/FM)	100W	5-100W	5-100W HF/6M	100W	20-150W	100W (2)	100W HF/6M 50W 2M, 20W 70CM	5-100W HF/6M 50W 2M/70CM	10-100W	100W	20-200W
Power (AM)	5-40W	5-25W	5-25W	25W	10-40W	25W	25W HF/6M 20W 2M, 12.5W 70CM	25W HF/6M 12.5W 2M/70CM	2.5-25W	25W	50W
DSP	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Tuner	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Keyer	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Speech Readout	No	Optional	Optional	Optional	Optional	No	No	Optional	No	No	No
VOX	No	Yes	Yes	Yes	Yes	No	Yes	N o	Yes	Yes	Yes
Power Requirments	12VDC, 20.5A	12VDC, 20.5A	12VDC, 20.5A	12VDC, 20.5A	125VAC	12VDC, 22A	12VDC, 22A	12VDC, 22A	12VDC, 22A	125VAC	125VAC
Antenna ports	1	2	2	2	1	1	2(4)	4(6)	2	2	1
Computer Port	Optional	RS-232	RS-232	RS-232	Optional	Optional	Optional	RS-232	Optional	Optional	Optional
Height (in.)	2.4	3.8	3.8	4.8	6	3.7	2.2	3.4	5.3	5.4	5.9
Width (in.)	7.1	10.6	10.6	13	16.1	9.4	6.3	10.2	16.1	16.4	16..4
Depth (in.)	9.2	10.7	10.7	13.1	17.6	9.6	8	10.6	12.4	13.9	14.8
Weight (lbs.)	6.4	15	15	25.4	50.6	12	6.6	14.4	30.8	33	51
Price	$769.95	$1099.95	$1349.95	$2299.95	$3999.95	$739.95	$1299.95	$1599.95	$1449.95	$2799.95	$4199.95

Manufacturer Model	SGC 04-01 SG-2000	SGC 04-10 SG-2000/POWERTALK	SGC 05-01 SG-2020
Bands	HF	HF	HF
Rx Range (MHz)	.5-30	.5-30	1.8-29.7
Power (SSB/CW/FM)	150W SSB/CW	150W SSB/CW	0-20W SSB/CW
Power (AM)	40W	40W	No
DSP	No	Yes	No
Tuner	No	No	No
Keyer	No	No	Yes
Speech Readout	No	No	No
VOX	No	No	No
Power Requirments	12VDC, 30A	12VDC, 30A	12V DC, 5A
Antenna ports	1	1	1
Computer Port	Optional	Optional	Optional
Height (in.)	4.6	4.6	2.75
Width (in.)	10	10	6
Depth (in.)	15	15	7.25
Weight (lbs.)	12	12	2.5
Price	$1599.95	$1849.95	$675.95

(1) One port for HF; one port for 6M
(2) Optional board required for FM
(3) HF/6M on one port, 2M on second port
(4) HF/6M one port, 2M/440MHz second port
(5) Two ports for HF, one dedicated for 2M
(6) Port per band. HF/6M can be combined
(7) Special order
(8) Cell blocked

All prices after Instant Coupons. Expiration dates vary, call for details.

We have a **SECURE** web site
Order on-line at www.aesham.com

KENWOOD

TM-D700
144/440 MHz Dual-Band Mobile

- 50W VHF / 35W UHF
- 118-1300 MHz Receive (cellular blocked)
- Full Dual-band operation VHF+VHF / VHF+UHF / UHF+UHF
- Remote Head installation only (cable kit included)
- Alphanumeric dot-matrix LCD amber display (reversible)
- Built-in 1200/9600 bps TNC compliant with AX.25 protocol + KISS
- Advanced APRS-99 features (improved from TH-D7A)
- Easy to use menu system like TH-D7A
- 200 memory channels with alphanumerics
- New backlit microphone with alphanumeric message input
- Audible APRS-99 Message receive (call sign) notification (req. VS-3)
- Satellite Packet (PACSAT) ready
- CTCSS encode/decode
- CTSCC Tone Frequency Scan
- Visual Band Scan Scope
- Up to (10) programmable memory scan banks
- Digital Code Squelch (DCS)
- DCS Frequency ID Scan
- Programmable via Internet w/PG-4S
- Built-in 9-pin PC connection
- AIP
- 1750 Hz Tone Burst
- Wireless Remote Control
- SkyCommand II control w/TH-D7A to TS-570/870
- Advanced SSTV control
- DX Packetcluster
- Digipeater operation (stand alone Digipeater)
- External GPS / VC-H1 / PC port
- VS-3 Voice Synthesizer (optional)
- 5.5"w x 1.2"h x 7"d (body)
- 5.5"w x 2.4"h x 1.2"d (head)

This device has not been approved by the Federal Communications Commission. This device is not, and may not, be offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

MFJ

Professional Classroom Tutor
MFJ-414 Features include LCD readout, printer port and audio tape recording output. Build and save three custom sets (16 characters each) for extra practice. Or combine these to give you 48 characters for using the KOCH method. Customize random words for practice, too. Use with 144/440MHz FM HT or HF transceiver for on-air code practice. VECs can give up to 16 exams. Full-featured memory keyer - has 1000 character memory, semi/auto modes, iambic A/B, reverse paddle, change speed and tone on-the-fly. Practice sending into the MFJ-414 with iambic paddle or straight key. Use built-in or external speaker or headphones. Includes serial port cable and open-end patch cable. 12 VDC or 110 VAC. 8½"w x 2¼"h x 6"d **$189.95**
MFJ-281 External *ClearTone™* Speaker. Use with above for loud volume **$12.95**
MFJ-1315 AC Adapter **$14.95**

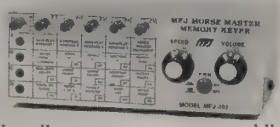
MFJ-554 Code Practice Oscillator

Designed for classroom use and abuse with great sound that enhances learning of Morse code. Plenty of volume from a built-in 1W amp and 3" speaker. Volume control and adjustable tone control. 400-1000Hz. On/Off switch, power ON LED, 1/4" key jack, 3.5mm external speaker jack and DC power input jack. Required 12V DC. Rugged all-metal enclosure. 4¼" x 1½"h x 5"d..... **$79.95**
MFJ-281 External *ClearTone™* Speaker. Use with above for loud volume..... **$12.95**
MFJ-550 Telegraph Key **$7.95**
MFJ-1315 AC Adapter **$14.95**

407D Deluxe Electronic Keyer

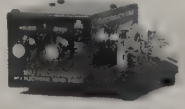
Features dot-dash mem., self completing dots and dashes; jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone & volume, ON/ OFF, tune, auto or semi-automatic. Selectable A or B-type iambic keying. Built-in speaker, uses 9V battery or MFJ-1312B AC adapter. 7" x 2" x 6"d **$69.95**
401D Econo Electronic Keyer II Similar to MFJ-407D but with external speed and volume controls, internal weight and tune controls. Uses 9V battery or MFJ 1312 AC adapter **$49.95**

492 Menu Driven Memory Keyer



No complex sequences. Save messages; decrement serial #s; enter iambic, semi-auto, handkey, message queue, paddle modes; select iambic A/B; Morse trainer; store starting serial #. Holds 192 characters in 4 mem., expand to 8K+ characters in 8 mem. Lith. batt. back-up. Front panel controls for speed (5–100 WPM) and volume, sidetone speaker. Direct and grid block keying. 9V battery or 110V AC adapter. 6½" x 2½" x 6¼" **$89.95**
493 All features of the 492, but with 32K memory IBM keyboard input, serial port for computer interface and QSO simulator..... **$129.95**
451 Morse Keyboard Stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC or MFJ-1312B 110VAC adapter **$99.95**
452 Morse Keyboard with 16 character LCD display. Comes with keyboard..... **$129.95**

422D Keyer-Paddle Combo



Keyer unit installs on top of Bencher iambic paddle. Uses Curtis™ chip. 9 to 50 wpm. Adjustable weight and tone, dot-dash mem. & sidetone. Semi-automatic & tune or auto modes. Keys grid block, cathode or solid state. Uses 9V batt. or AC adapter. 4⅛"x2⅜"x5½"d.. **$144.95**
422DX Keyer only..... **$79.95**

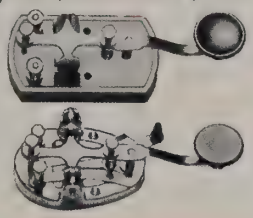
LOGIKEY

IDIOM Press

Full featured version of the famous Super CMOS III keyer design! This new super friendly Fully Iambic Keyer offers:
K-3 Non-volatile memory. • 6 editable messages, 1,530 characters • Messages can include powerful programmed functions, eg. automatic contest numbers, speed changes, pauses • Message can allow paddle inserted text and loop for continuous replay • Linear speed control – 5-60 WPM • Adjustable weighting and monitor tone • Tune function • Auto character spacing if desired • Can emulate other keyers, including Curtis "A" timing • Ultra Speed Mode for messages up to 990 WPM! • Contest serial#s 001-9999, with push button decrement • Beacon capability • Full compensation for QSK rig timing • Keys solid-state or grid-blocked tube rigs. • 12V DC, < 0.1 amp • 4¼"w x 2¼"h x 4¾"d.... **$119.95**
HK-3 Hook-up kit for the K3. Includes Paddle to Keyer Cordset; RCA to RCA Keyer Output Cable and 2.5 mm DC Power Plug Cordset for 12V **$10.95**
www.qth.com/idiom

AMECO

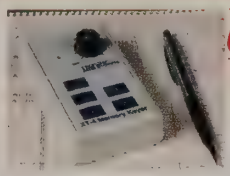
OCM-2 Combination Code Practice Oscillator & CW Monitor
Volume control, 3" speaker, and headphone terminals. Requires a code key and a 9V battery.
Kit $19.95 • Wired $24.95



K-1 Low-cost general purpose key with phenolic base, adjustable tension and contact spacing. **$10.95**
K-4 Deluxe high quality key. Polished brass base, shorting bar **$16.95**

More AMECO Products – See Price List & Index

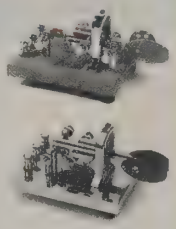
UM Unified Microsystems



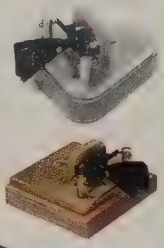
XT-4 CW Memory Keyer
Designed for QRP, Field Day, mobile CW county hunting - any portable operation. Size also goes well in the shack with new smaller rigs. 8-45 WPM. **Memories:** 4 with 100 Morse characters each Positive keying output only via RCA phono jack output. 1/8" (3.5mm) stereo jack input. Paddle reverse for left or right hand operation. Auto power save mode w/flashing LED engages after 30 minutes of inactivity. Requires 9V alkaline battery **$79.95**
KC-4 Cable set for XT-4..... **$9.95**

VIBROPLEX

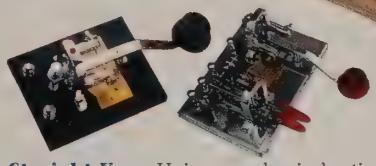
The **Original "Bug"**, patented in 1904, is still manufactured today using tools & dies similar to those used by its inventor, Horace G. Martin. Designed for code speeds of 20-50+ wpm. Standard model - painted base and chrome top parts. Deluxe model - polished chrome base and top parts with fine jewel movements for smooth oper. Presentation model - polished chrome base with 24K gold-plated base plate & chrome top parts. Gold model - gold-plated base with chrome top parts.
Standard (#110) **$159.95** • **Deluxe** (#105) **$199.95**
Presentation (#100) **$269.95** • **Gold** (#090) **$299.95**



Vibrokeyers Single lever paddle (top) initiates automatic dots & dashes of an electronic keyer. **Iambic paddle** allows auto dot & dash insertion. **Standard:** black base, chrome parts; **Deluxe:** chrome base and top parts with jeweled movements; **Presentation:** (Iambic only) 24K gold-plated base and top parts with jeweled movements; **Gold:** 24K gold-plated base and top parts with jeweled movements.
Vibrokeyer: Standard (#120) **$139.95**
Deluxe (#115) **$179.95** • **Gold** (#113) **$269.95**
Iambic: Standard (#135) **$139.95**
Deluxe (#130) **$179.95** • **Presentation** (#125) **$239.95**
Gold (#123) **$269.95**



Brass Racer Iambic Solid brass Iambic paddle mounted on a polished hardwood base.(#145) **$99.95**
Square Brass Racer Solid lacquered brass Iambic paddle on a polished hardwood base. Magnetic action, no springs ....(#150) **$139.95**

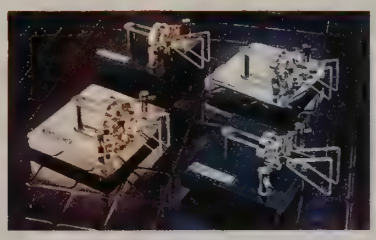


Straight Keys: Unique mechanical action, unlike any straight key ever manufactured.
Standard (#155) **$139.95** • **Deluxe** (#160) **$179.95**
Gold (#153) **$269.95**

Deluxe Double Keys: Choice of Iambic & Straight or Vibrokeyer & Straight Key. Double keys allow you to instantly switch from using an electronic keyer to the personal touch of a Straight Key.
Straight key/Iambic (#165) **$319.95**
Straight key/Vibrokeyer (#170) **$319.95**

BENCHER, INC.

"RJ" HAND MORSE KEYS • A superb and responsive instrument which will bring new pleasure to traditional Morse keying. Features include oil impregnated sintered bearings at pivot points to impart friction-free pivoting and wobble-free vertical tracking. Stainless steel locking screw allows individual adjustment for arm height, tension and contact spacing. Black "Navy" style knob with removable skirt gives a solid feel with outstanding tactile feedback, Heavy metal base available in black texture or chrome finish with anti-skid rubber feet.
RJ-1 Black base **$95.95** • **RJ-2** Chrome base **$110.95**



IAMBIC & SINGLE LEVEL PADDLES • The highest quality, offering precise control, reliability and years of trouble-free operations. Wide-range adjustment of tension and contact point spacing. Self adjusting needle bearings, gold-plated solid silver contact points, and polished acrylic plastic paddles. The Main frame, contact post, spring posts and bearing ring are all precision machined from solid brass, then chrome or gold plated for durability and rich appearance. Heavy steel base with non-skid feet.
BY-1 Black base **$94.95** • **BY-2** Chrome **$109.95**
BY-3 Gold **$279.95** • **BY-4** Black, Gold comp. **$149.95**

MFJ Switching Power Supplies

Power your HF transceiver, 2 meter/440 MHz mobile/base and accessories with these new 25 or 45 Amp MFJ MightyLite™ Switching Power Supplies!

No RF hash . . . Super lightweight . . . Super small . . . Volt/Amp Meters . . .

MFJ-4125

MFJ-4225MV

MFJ-4245MV

MFJ's new adjustable voltage switching power supplies do it all! You can power your HF transceiver or 2-Meter/440 MHz mobile or base and accessories with ease.

MFJ's *MightyLites*™ are so light and small you can carry them in the palm of your hand! Take them with you anywhere – No more picking up and hauling around heavy, bulky supplies.

MFJ's 25 Amp *MightyLite*™ weighs just 3.7 lbs. -- that's *5 times lighter* than an equivalent regular power supply. The 45 Amp'er is just 5.5 pounds!

No RF hash!

Some competing switching power supplies generate objectionable RF hash in your transmitted and received signal. But, these babies are clean!

Low Ripple and Highly Regulated

Less than 35 mV peak-to-peak ripple under 25 or 45 amp full load. Load regulation is better than 1.5% under full load.

Fully Protected

You won't burn up our power supplies! They are fully protected with Over Voltage and Over Current protection circuits.

Worldwide Versatility

MFJ *MightyLites*™ can be used anywhere in the world! They have switchable AC input voltage and work from 85 to 135 VAC or 170 to 260 VAC. Replaceable fuse.

MightyLitesTM . . . Mighty Features

MFJ *MightyLites*™ model 4225 and 4245 feature a front-panel voltage control. It lets you vary the output voltage from 9 –15VDC, highly regulated.

You get an easy access front-panel with five-way binding posts for heavy duty use and a cigarette lighter socket for mobile accessories. MFJ-4245MV has two sets of quick-connects on the rear for accessories.

Large 3 inch dual meters are brightly illuminated to make it easy to monitor load voltage and current.

A whisper quiet internal fan efficiently cools your power supply for long life.

MFJ "No Matter What™ Warranty"

MFJ will repair or replace (at MFJ option) your *MightyLites*™ supply for one full year.

Three models to choose from . . .

MFJ-4125 (left) Basic, no metering. 25 Amps maximum or 22 Amps continuous. Measures 5½"w x 2½"h x 10¾"d.Weighs 3.5 pounds **$99.95**

MFJ-4225MV (center) 25 Amps maximum or 22 Amps continuous. Weighs 3.7 pounds. Measures 5¾ x 4½ x 6 inches..... **$139.95**

MFJ-4245MV (right) 45 Amps maximum or 40 Amps continuous. Weighs 5.5 pounds. Measures 7½ x 4¾ x 9 inches **$189.95**

MFJ 35/30 Amp Adjustable Regulated DC Power Supply

Massive 19.2 pound transformer . . . No RF hash . . . Adjustable 1 to 14 VDC . . .

MFJ's heavy duty conventional power supply is excellent for powering HF or 2 Meter/440 MHz transceiver/accessories.

A massive 19.2 pound transformer makes this power supply super heavy duty! It delivers 35 amps maximum and 30 amps continuous without even flexing its muscles. Plugs into any 110 VAC wall outlet.

It's highly regulated with load regulation better than 1%. Ripple voltage is less than 30 mV. No RF hash -- it's super clean!

Fully protected -- has over voltage protection, fold back short circuit protection and over-temperature protection.

You get front panel adjustable voltage from 1 to 14 VDC with a convenient detent set at 13.8 VDC. A pair of front-panel meters let you monitor voltage and current.

Three sets of output terminals include a pair of heavy duty five-way binding posts for HF/VHF radios, two pairs of quick-connects for accessories and a covered cigarette lighter socket for mobile accessories.

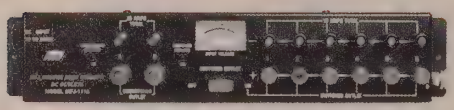
A front-panel fuse holder makes fuse replacement easy. Whisper quiet fan speed increases as load current increases -- keeps components cool. 9½"w x 6"h x 9¾"d.

The MFJ-4035MV is protected by MFJ's famous No Matter What™ one year limited warranty. We will repair or replace (at MFJ option) your product for 1 full year.

MFJ-4035MV $139.95

MFJ *High Current* Multiple DC Power Outlets

Power two HF/VHF transceivers and six or more accessories from your 12 VDC power supply

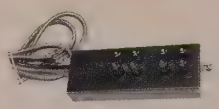


MFJ-1118 (left) This is MFJ's most versatile and highest current *Deluxe Multiple DC Power Outlet.* Lets you power two HF and/or VHF trans- ceivers and six or more accessories from your transceiver's main 12 VDC supply

Two pairs of super heavy duty 30 amp 5-way binding posts connect your transceivers. Each pair is fused and RF bypassed. Handles 35 Amps total.Six pairs of heavy duty, RF bypassed 5-way binding posts let you power your accessories. They handle 15 Amps total, are protected by a master fuse and have an ON/OFF switch with "ON" LED indicator.

Built-in 0-25 VDC voltmeter. Six feet of super heavy duty eight gauge color-coded cable with ring tongue terminals. Binding posts are spaced for standard dual banana plugs. Heavy duty aluminum construction. 12½ x 2¾ x 2½ inches. **$74.95**

***NEW!* MFJ HF DC Power Outlet**



MFJ-1117 Similar to MFJ-1118 but can power up to four different HF or VHF radios at the same time. Two 35 amp single posts, one 35 amp dual post. Super tiny 8x2x3 inches fits anywhere at your operating position. No meter, power LED, on/off switch..... **$49.95**

MFJ-1116 (center) Similar to MFJ-1118. No 30 amp posts. Has "ON" LED and 0-25 VDC voltmeter. 15 amps total..... **$49.95**

MFJ-1112 (right) Similar to MFJ-1116. No on/off switch, LED, meter, fuse..... **$34.95**

Each has MFJ's famous *No Matter What*™ one year limited warranty. MFJ will repair or replace (at MFJ's option) your high current multiple DC power outlet for 1 year.

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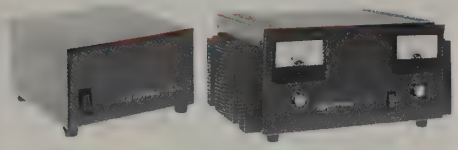
AES is first in bringing you the most innovative financing in the industry. In cooperation with the largest finance company on the New York Stock Exchange, The Associates, AES now gives you the ability to get instant approval on a revolving credit basis. Another way for you to own the equipment you want,

TODAY

Call us now for details.

ASTRON CORPORATION Power Supplies



The alternative to costly "matching" Supplies!

• 105–125V AC input, 13.8V DC output; internally adjustable from 11–15V • Electronic regulation with fold-back current limiting & crowbar overvoltage protection • Heavy-duty heat sink • 3-wire cord • 1-year Warranty • Made in U.S.A.

Separate volt and amp meters on RS-20M, 35M, 50M and 70M. Separate volt and amp meters, plus voltage adjustment (2–15V DC) on VS-20M, VS-35M and VS-50M. RM-35M, RM-50M and RM-60M are rack mount models.

Astron Model	Cont. Amps	ICS Amps	Size (in.) H W D	Shipping weight	
RS-7A	5	7	3¾ x 6¼ x 9	9	$59.95
RS-10A	7½	10	4 x 7½ x 10¾	11	69.95
RS-12A	9	12	4½ x 8 x 10¾	13	79.95
RS-20A	16	20	5 x 9 x 10½	18	99.95
RS-35A	25	35	5 x 11 x 11	27	149.95
RS-35A/220V	Same as RS-35A but 220V input				169.95
RS-50A	37	50	6 x 13 ¾ x 12	46	219.95
RS-70A	57	70	6 x 13¾ x 12	48	259.95
With separate Volt & Amp meters					
RS-20M	16	20	5 x 9 x 10½	18	119.95
RS-35M	25	35	5 x 11 x 11	27	169.95
RS-50M	37	50	6 x 13¾ x 11	46	239.95
RS-70M	57	70	6 x 13¾x 12	48	289.95
Adjustable output; separate Volt & Amp meters					
VS-20ML	16	20	5 x 9 x 10½	20	139.95
VS-35M	25	35	5 x 11 x 11	29	189.95
VS-50M	37	50	6 x 13¾ x 11	46	259.95
Rack mount models; separate Volt & Amp meters					
RM-35M	25	35	5¼ x 19 x 12	38	249.95
RM-50M	37	50	5¼ x 19 x 12	50	279.95
RM-60M	50	55	7 x 19 x 12	60	359.95

Models with Added Features

RS-4L Has a built-in cigarette lighter receptacle in the front panel. 13VDC @ 4A peak, 3 Amps continuous. 3½"h x 6½"w x 4¼"d, 6 lbs **$49.95**

RS-12S Power supply with built-in speaker. Rated 13VDC @ 12 Amps peak & 9 Amps continuous. 4½"h x 8"w x 9"d, 13 lbs **$89.95**

Lightweight Switching Power Supplies

SS-25 12V DC, rated 20 Amps continuous, 25 Amps ICS. 3"h x 7"w x 9½"d, 4.2 lbs..... **$109.95**

SS-25M As above, with volt/amp meters... **$129.95**

SS-30 12V DC, rated 25 Amps continuous, 30 Amps ICS, 3¾"h x 7"w x 9½"d, 4 lbs, 8 oz.. **$119.95**

SS-30M As above, with volt/amp meters... **$139.95**

Power Inverters

General Purpose

12/115 Converts 12V DC to 115VAC @ 60 Hz. Provides convenient AC house current in your boat, car, truck, camper, etc. Powers your ham rig, small household appliances, TV, tools, radios & lights up to 200W contin., w/peaks up to 240W & overload protected. Note: This unit produces square wave output, not recommended for devices where high transients are not tolerable. 4½"h x 8"w x 9"d, 9 lbs **$69.95**

28V Aircraft

N2412-12 Converts 22 to 32V DC input to 13.8V DC output @ 9 amps. Eliminates tapping into a 28V battery for 12V power..... **$49.95**

N2412-20 As above, but rated at 16 Amps.. **$79.95**

DM-340MVT Power Supply

Input: 120V AC 50/60Hz
Output: 13.8V DC (0–15V adjustable)
Rated: 30A Cont./35A Max.
Voltage Regulation: Under 2%
Ripple Volt.: Under 30mVp-p
Protection: Automatic Shutdown over 35A
• Volt & amp meters • Cooling fan • Binding posts • Quick-connects • Cigar lighter socket • 9"w x 6"h x 9"d, 19 lbs..... **$179.95**

NCG

Variable Power Supplies

RP-150 20 Amp Power Supply with the following features:

• 13.8V DC @ 20 amps continuous • Adjustable voltage 2V to 15V DC • Internal cooling fan • Large, lighted volt and amp meters • Cigarette lighter socket with cap • Binding posts on front and rear • Ripple less than 3.1mV peak to peak • 8¼"w x 4¼"h x 7½"d, 14 lbs **$159.95**

RP-300 30 Amp Power Supply, same as RP-150 but:

• 30 Amps continuous • Binding Posts & spring loaded Dual Terminals on front • Detachable power cord • 10½"w x 5"h x 11"d, 24 lbs..... **$239.95**

TRIPP LITE THE POWER PEOPLE

Power Supplies

Powerful Values for Ham Operators

105-125V AC INPUT, 13.8 VDC output; perfect for all your Ham radio equipment. A wide selection, including most popular sizes, rugged construction and low prices.

- Solid state, integrated circuitry
- Current-limiting foldback for complete over current protection
- Crowbar Overvoltage protection on 15 amp and larger models
- High quality filtering for very low ripple and low noise, metal cases on all models
- Regulated, output 95% of no-load value

Model	Cont. amps	ICS	Size (in.)	Wt.	Price
PR-7	5	7	3¾ x 6½ x 7½	7	$49.95
PR-10	7.5	10	4½ x 6¾ x 7¾	10	69.95
PR-12	9	12	4½ x 6¾ x 7¾	11	74.95
PR-20	16	20	4½ x 6¾ x 7¾	15	99.95
PR-30	24	30	6¾ x 6¼ x 10¼	23	129.95
PR-40	32	40	6¾ x 10½ x 11½	27	169.95
PR-50	37	50	6¾ x 10½ x 11½	30	199.95
PR-60	48	60	6¾ x 10½ x 11½	33	239.95

PowerVerter® Ultra Compact Inverters

• Converts vehicle battery power to clean, safe and efficient AC power • Ultra compact design • Choice of 140w or 300w models Plugs into vehicle cigarette-lighter socket.

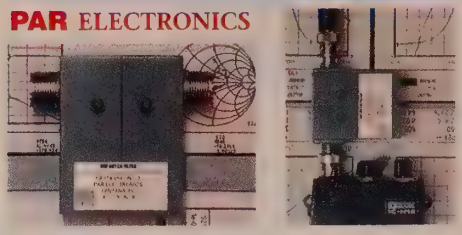
These Low Cost DC to AC Inverters give you access to AC power wherever you need it. Harnessing the 12-volt battery power of your automobile, boat, RV or service truck, they let you use power tools at an out-of-the-way work site, household appliances at a campsite, or office equipment on the road.

Features: Electronic Circuit Protection • Low Battery Alarm & Shutdown • Illuminated On/Off Switch Cigarette Lighter Plug • Metal Housing • Built-in High-Speed Cooling Fan (PV-300)

SPECIFICATIONS	PV-140	PV-300
Maximum Continuous Power	140W	300W
Surge Capacity (Peak Power)	200W	500W
Wave Form	Modified Sine Wave	
AC Receptacles	1	2
Size (L x W x D inches)	6x3x1½	6x4x1¾
Weight	1 lb, 4oz	2 lbs
Price	**$49.95**	**$74.95**

INTERMOD FILTERS

PAR ELECTRONICS



Solve most intermod or front end overload problems from paging systems with these small, asymmetrical, 45 to 54dB Notch Filters. The design is centered on the offending pager spectrum of 152 to 153 MHz and works effectively with a loss of 0.5 dB or less and a 1.25:1 VSWR. Works with dual-band (2m/70cm) transceivers providing low-loss pass-thru of 70cm signals.

VHFDN152 2m base or mobile intermod filter, SO-239 connectors, 50W. 2"h x 1"d x 2½"w **$62.95**

VHFTN152-158 Triple Cavity. Similar to VHFDN152 except it places a second notch in the 158MHz pager band in addition to the dual notch in the 152 MHz pager band. 2½"h x1 "d x 3"w .. **$82.95**

VHFDN152HT 2m Intermod filter for handhelds BNC connectors, 20W. 1½"h x ¾"d x 2"w **$68.95**

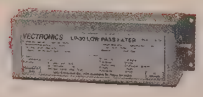
UHFDN450 UHF Intermod filter for base or mobile. Blocks pagers/two way transmitters that cause 70cm intermod; transparent to 2 meters **$62.95**

UHF-12 12" Belden RG-58/U jumper cable with silver/gold/teflon PL-259's on each end **$9.95**

NYE VIKING

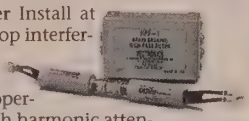
Low Pass Filter
Install between transmitter and antenna to eliminate TVI caused by harmonics from 1.8–30MHz transmitters. Rated 2KW, 5KW SSB peak. Over -65dB attenuation above 57MHz. SO-239 connectors..... **020-001 $56.95**

VECTRONICS



LP-30 Low Pass Filter
Suppress TV interference from HF transmitters. Use between transmitter and antenna or tuner. Up to –70dB attenuation of harmonics falling in TV bands. For 52Ω, up to 30MHz and 1500W RF continuous power **$49.95**

LP-2500 Rated for 2.5KW continuous..... **$79.95**



HPF-1 High Pass Filter Install at TV antenna terminals stop interference caused by overload and harmonics from HF transmitters operating below 30MHz. High harmonic attenuation but low loss in 52 to 550MHz TV passband. For 300Ω, but baluns and Type F connector supplied for 75Ω..... **$24.95**

AMECO

High Pass Filters Stop TV, FM & VCR interference caused by harmonics or overload from HF amateur radio transmissions, etc. Installs at TV or VCR antenna terminal or connector. Sharp frequency cutoff at 52MHz with 70dB attenuation below 50MHz.

HP-300T (300Ω) or **HP-75T** (75Ω) .....ea. **$12.95**

ZENITH High Pass Filter — CLOSEOUT

Install at TV set & attach antenna lead. Eliminates interfer.coming from 6-160M transmitters. >45dB attenuation @ 52MHz & lower. For 75Ω systems, type-F connectors. 2" x 1¾" x 1" **A-8477 $9.95**

K-COM Telephone RF Interference Filters

Cure telephone RF interference in the most irritating cases even when dealing with transmitters with full legal power output. Use any number of filters with no adverse effect on telephone performance. Fully assembled, with complete installation instructions.

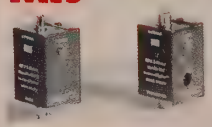
RF-1 For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc. Standard modular connectors . **$16.95**

RF-1/2-line Correct filter for two-line telephone sets & multi-line, multi-station electronic key phone systems in business environments **$22.95**

RF-1/coiled For use when RFI enters thru coiled telephone cord between base & handset **$22.95**

RF-2 Hard-wired, provides a wide range of installation opt. to add RFI rejection at a variety of physical & electrical locations in the system wiring; inside jacks, behind wall mounts, security systems . **$10.95**

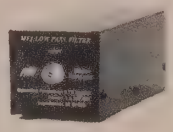
MFJ ENTERPRISES, INC. IntermodFighter™



Eliminate intermod in your 2M HT or mobile station. Three high-Q bandpass filters and two L-sections give razor sharp selectivity to knock out Interfering signals below & above 2m.

MFJ-713 Has BNC connectors for use HTs. Self-contained, and uses a 9-volt battery. To eliminate intermod, remove the rubber duck and replace it with the MFJ-713. Re-install the duck – no more intermod! RF tight, rugged aluminum case **$59.95**

MFJ-714 For mobile transceivers, SO-239 connectors. Installs between rig & ant. Uses 12V DC. **$59.95**



MFJ-704 50Ω Low Pass Filter Installs between HF transmitter and antenna. Reduces TVI from harmonics. that fall in the TV band. 1kw from 1.8 to 30MHz, 3"w x 3"h x 9"d **$49.95**

MFJ-711 75Ω High Pass Filter Installs at TV or VCR antenna input. Reduces or eliminates interference from HF transmitters operating below 30MHz **$24.95**

DCI DIGITAL COMMUNICATIONS

Bandpass Filters

Install between your 2m, 220 or 440MHz rig and antenna to reduce strength of out-of-band interfering signals while allowing signals you want to hear pass through at full strength.

• Eliminate random squeals, squawks, beeps & strange voices from your VHF radio caused by Intermod from strong, nearby pagers, police radio, etc. • Hear desired signals even in crowded urban centers with high-powered commercial systems. • Design: (2M/220MHz) (4) helical resonators with aperture coupling, (440MHz) (4) 1/4-wave linear resonators with aperture coupling VSWR 1.5:1 – rated at 200W. • Also reduces spurious emissions on transmit. • Made of extruded aluminum, copper and brass. 12w"x 3"h x 5"d, 2 lb, 11oz

146-4H Passband: 144–148; Loss <1 dB; Selectivity: –57dB @ 136MHz & –43dB @ 156MHz; SO-239 silver-teflon connectors..... **$89.95**

145-2H – Passband 144 to 146 MHz **$89.95**

223.5-3H – Passband: 222 to 225MHz; Loss 1 dB; Selectivity: –33dB at 233 3MHz and –28dB at 233 MHz; SO-239 silver- telfon connectors..... **$89.95**

445-10C – Passband: 440 to 450MHz; Loss 1 dB; Typical selectivity: –47dB at 425MHz & –50dB at 456 MHz; Type-N silver- teflon-gold connectors.. **$109.95**

435-10C – Passband 430 to 440MHz **$109.95**

Upgrade to type-N connectors on 2m and 220MHz models – **add $10 to price; Special Order**

RF Inquiry INC.

HI-Q Common-Mode™ Filters Regular lowpass filters eliminate harmonic-type interfer. but are not capable of filtering out "Common-Mode" (differential) noise (energy transfer between transmitter & ground incl. stray capacitance). For tough RFI problems & cleaner signals, add an RF Inquiry filter.

CF250E-UHF..... **$89.95**

CF5KV-UHF..... **$124.95**

Operating Frequency	1.8-70MHz
Common Mode Attenuation	-50 to -60db Below 250MHz)
Power Rating	CF250E 250W CF5KV 5,000W
Insertion Loss	Less than 0.1dB
Impedance	50Ω
Connectors	SO-239 teflon
Size	CF250E 25dia. x 255mm CF5KV 54dia. x 300mm
Weight	CF250E 0.5 lb. CF5KV 1.3 lb.

AIM Small Power Supplies

38-384 Light Duty DC Power Supply Input: 115V AC. Output: 13.8V DC regulated @ 4A Front panel binding posts, LED "ON" indicator, fuse protection. 7¾"d x 4¼"w x 3"h, 5½ lbs ... **$39.95**

38-305 AC Adapter Provides multiple low-voltage DC to operate various battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12V DC @ 500ma. Multiple application plugs and 9V snaps fit most devices . **$9.95**

38-312 Regulated AC Adapter Multi-volt. w/multiple plugs and 9V snaps. 1.5, 3, 4.5, 6, 7.5, 9 or 12V DC regulated @ 1200ma. to operate a range of batt. oper. devices **$29.95**

DIAMOND ANTENNA

Loaded with features

GZV-4000 Switching Mode DC Power Supply w/ Speaker 120V AC input • Vari. output: 5–15V DC w/center detent at 13.5V DC • 40 amp contin. rating, 100% duty cycle • Over temp., overload, short-circuit protection w/current foldback at approx. 42 amps • Overload indicator • Selectable monitor. of voltage & current • DC terminals & cig. lighter jack • Filtered AC line • 8¼" x 13" x 4½"; 8 lbs ... **$199.95**

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Browse Our Store On-Line at www.aesham.com

MIRAGE
VHF/UHF AMPLIFIERS

Add a MIRAGE amplifier to your rig for 30 to 600 watts of BRUTE POWER! Models for 6 meters through 70 cm – Base, Mobile, Repeater or ATV operation.

• 12V DC • FM/SSB/CW modes • Continuous duty • 20dB GaAsFET preamp • Overdrive & High-temp protection • Remote control capability

Model	MHz	Max Input	Max out	amps	preamp	
A-1015G	50-52	1-15W	150W	23	yes	$349.95
B-34	144-148	8W	35W	4	no	69.95
B-34G	144-148	8W	35W	4	yes	89.95
B-55G	144-148	10W	50W	5	no	109.95
B-215G	144-148	0.25-5W	150W	20	yes	339.95
B-1016G	144-148	0.2-15W	160W	25	yes	339.95
B-1030G	144-148	10W	300W	48	yes	619.95
B-2516G	144-148	20-35W	160W	25	yes	269.95
B-2530G	144-148	10-35W	300W	48	yes	619.95
B-5016G	144-148	20-60W	160W	22	yes	269.95
B-5030G	144-148	0.5-50W	300W	48	yes	599.95
B-310G	144-148	0.25-8W	100W	15	yes	179.95
B-320G	144-148	2.5-50W	200W	25	yes	399.95
B-510G	144-148	2.5-50W	100W	15	no	209.95
BD-35	144/440	1-7W	45/35W	7	no	149.95
C-22G	222-225	2W	20W	5	yes	154.95
C-211G	222-225	2W	110W	20	yes	299.95
C-106G	222-225	10W	60W	12	yes	214.95
C-1012G	222-225	10W	120W	5	yes	299.95
C-1022G	222-225	10W	220W	20*	yes	589.95
C-2512G	222-225	30W	120W	20	yes	289.95
C-2522G	222-225	30W	200W	42	yes	589.95
C-5022G	222-225	50W	200W	42	yes	579.95
D-15N	425-450	2W	15W	3	no	169.95
D-26N	430-450	2W	60W	12	no	244.95
D-1010N	430-450	10W	100W	15	no	354.95
D-3010N	430-450	30W	100W	20	no	329.95
D-1010ATVN	430ATV	10W	100W	20	no	369.95

* at 28VDC N denotes Type-N connectors

RC-1 Remote Control Head For most Mirage amps. Controls: Power & preamp On/Off, SSB/FM mode switch. 18' cable. 1¾" x 3¾" x 2½ **$45.95**

Docking Boosters

Slide your handheld into a Mirage docking booster and your HT instantly becomes a powerful mobile or base!

- Boost your RF power to mobile or base station levels, up to 50W
- Replace your HT battery
- Becomes a secure and convenient HT holder

Mirage docking boosters have selectable HT voltages that let you use most handhelds old or new. Requires 13.8 VDC. You can place it on your dashboard or table or mount it securely with its mounting bracket and tilt it for convenient operation.

B-24-G For 2m FM handhelds. Delivers up to 50W output with just 0.5 to 8W input. Has 18dB GaAsFET preamp with on/off switch. Preamp On, On Air, and Transmit LEDs. Compact – 3¼" x 3¼" x 4¼". Choose adapter to fit your handheld* **$114.95**

BD-25 For dual band FM HTs. Delivers up to 45W on 2M & 35W on 440MHz with only 0.5-8W input. Mirage's *FullDuplexAMP™* lets you talk on one band & listen on the other band at the same time. Requires compatible HT. Automatic band selection. Frequency Band and Power On LEDs. Reverse polarity protection, On/Off switch. 3¼" x 3¼" x 5¼". Choose an adapter to fit your handheld* .. **$164.95**

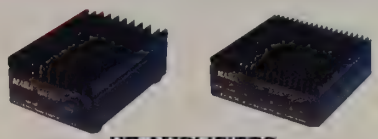
** See Mirage in the Price List for HT adapters, and also a listing of Mirage Repeater Amplifiers.*

MAHA
DOCKING BOOSTERS

With the appropriate adapter, you can slide on & boost your ICOM, KENWOOD or YAESU handheld radio up to 50W. Forget about the battery pack, the booster will power the HT at 5W. Also works with ADI & RADIO SHACK HTX-202 .

MH-A301 • 2m FM, 5W in/50W out, 18dB GaAsFET preamplifier **$115.95**

MH-A302 • **Dual Bander** –2m 5W in/45W out; 440MHz, 5W in/35W out..... **$165.95**



HT AMPLIFIERS

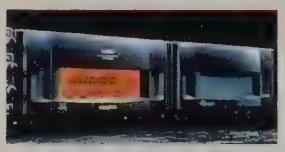
MH-A101 • 2m FM, 5W in/35W out..... **$69.95**

MH-A102 • 2m FM/SSB, 5W in/35W out, 15dB GaAsFET preamplifier..... **$89.95**

MH-A103 • 2m FM/SSB, 5W in/50W out, 15dB GaAsFET preamplifier **$119.95**

MH-A104 • 2m FM/SSB, 5W in/100W out, 15dB GaAsFET preamp, adjustable.... **$229.95**

MH-A201 • **Dual Bander** – 2m 5W in/45W out; 440MHz 5Win/35W out..... **$159.95**



YAESU
QUADRA SYSTEM
HF & 6M

- Amateur Band Coverage: 160–15 & 6 meters
- 1000W Power Out @ 220V AC 500W on 6-meters
- (8) MRF150 Power MOS FETs
- Multi-function Omni-Glow LCD Display
- Automatic System Monitoring with VSWR Protection
- Built-in High-Speed Antenna Tuner
- (2) RF inputs • (4) RF outputs
- Automatic Bandwswitching with Yaesu's FT-1000D, FT-1000MP, FT-920 & FT-900
- (2) input voltages: 117VAC for 500W; 220V AC for 1000W
- Separate Amplifier and Power Supply Units
- 16¼" x 5¾" x 16¼" (each)
- (Amp) 33 lbs; (Power Supply) 26 lbs..... **$3999.95**

ICOM

PW-1 HF/50MHz All Band Solid State Linear amplifier. 100W of drive delivers 1KW PEP SSB and 1KW CW/RTTY output (100% duty cycle). Automatic band change. Built-in automatic antenna tuner for all amateur bands including 6 meters. Wide ALC adjustable range allows use with almost any rig. Removable control head, full break-in CW oper. Built-in 110/220VAC supply w/auto. input voltage selector. 14"w x 10⅝"h x 14⅜"d, 56 lbs..... **$4799.95**

SGC

SG-500 (52-96)
SmartPower Cube™

A fully automatic band switching, microprocessor controlled HF linear amplifier. Covers 1.6–24MHz, ideal for fixed, mobile, and marine operation Nearly indestructable! Cast-alum. enclosure, extra heavy duty heat sinks, powder coat finish and durable electronic components. 500W PEP output with 50-90W input; CW rating 500W output for 10 minutes, or unlimited with optional fan. 10–18 VDC @ 40A average (SSB), 90A peak, or CW. 6"h x 12¾"d x 11½"w, 21 lbs..... **$1169.95**

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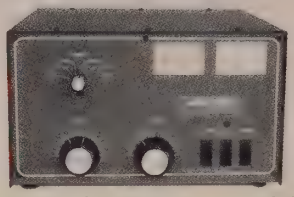
AL-811 $599.95



AMERITRON HF Linear Amps with 811A Tubes

Only the Ameritron AL-811H gives you four fully neutralized 811A transmitting tubes. You get absolute stability and superb performance on higher bands that can't be matched by un-neutralized tubes. Delivers 800 watts PEP, 600 watts CW output

Ameritron mounts the 811A tubes vertically – not horizontally – prevents hot tube elements from sagging and shorting out. Others, using potentially damaging horizontal mounting, require special 811As to retard sagging/shorting.

A quiet, powerful computer grade blower draws in plenty of cool air. It pressurizes the cabinet and efficiently cools your 811A tubes. Our air flow is so quiet, you'll hardly know it's there – unlike noisy, poorly chosen blowers.

You also get efficient full size heavy-duty tank coils, full ht. computer grade capacitors, heavy- duty high silicon core power transformer, slug tuned input coils, operate/standby switch, transmit LED, ALC, dual meters, QSK compatibility w/QSK-5 plus more!

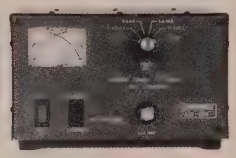
Model **AL-800** uses three 811A tubes and delivers 600 watts PEP, 500 watts CW or 400 watts continuous output.

AL-80B $1199.95

Desktop Kilowatt Amplifier with 3-500ZG Graphite tube

Full kilowatt PEP output from a whisper quiet compact desktop linear. Only 8½ x 14 x 15½ inches. Plugs into nearest 120 VAC outlet. All bands 160-15 Meters, 1000 Watts out on SSB, 850 Watts out on CW, genuine Amperex 3-500ZG tube has graphite plate, nearly 70% efficiency, inrush current protection, multi-voltage transformer.

ALS-500M



ALS-600

ALS-500M Mobile no tune Solid State mobile amp has 500 watts output and covers 1.5-22 MHz

Ideal mobile amplifier uses 13.8 Vdc mobile electrical system, very compact – only 3½ x 9 x 15 inches, extremely quiet, 500 W output, 1.5-22 MHz coverage, instant bandswitching, no tuning, no warm up, no tubes, SWR protected..... **$699.95**

ALS-600 No tune Solid State base amp includes heavy duty power supply, delivers 600 Watts output

No tuning, no fuss, no worries -- just turn it on and operate. Includes AC power supply, 600 W output, continuous 1.5-22 MHz coverage, instant bandswitching, fully SWR protected, extremely quiet, very compact. Amplifier is 6 x 9½ x12"..... **$1129.95**

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AL-800H $2199.95
AL-800 $1529.95

AMERITRON HF Linear Amps with the Eimac™3CX800A7

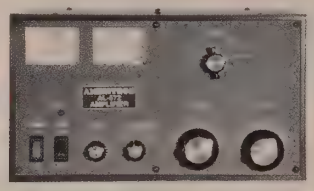
Ameritron's new 800/H amplifiers cover 160-15 Meters including WARC bands. The AL-800 has a single Eimac® 3CX800A7 tube and produces 1250 Watts PEP. **Model AL-800H** has two 3CX800A7s giving 1500 watts plus.

Both amps have an adjustable slug tuned input circuit, grid protection, ALC control that is front panel adjustable, vernier reduction drives, heavy duty 32 lb. grain oriented silicone steel core transformers & high capacitance computer grade filter capacitors.

These amplifiers have multi-voltage operation (14 user slectable AC line voltage from 90-140; 200-250 VAC), quiet pressurized ventilation systems, dual illuminated Cross-Needle meters that read peak forward and reflected power, SWR, high voltage, grid current and plate current.

Vernier reduction drives make tuning adjustments smooth & easy. Ameritron's exclusive *Step-Start Inrush Protection*™ stops damage to your amplifier from inrush current. Amps feature an attractive Lexan front panel decal & superior, all metal construction – it's built to last! Ultra compact desktop size is perfect for your operating station. 8½ x 16½ x 14¾".

AL-572 $1299.95



Near Legal Limit™

New class of *Near Legal Limit*™ amplifier gives you 1300 Watt PEP SSB power output for 65% of price of full legal limit amps! Four rugged Svetlana Russian 572B tubes. Instant 3-second warm-up. Plugs into 120 VAC. Compact 8½ x 15½ x 14½ inches. Covers 160 to 15 meters, delivering 1000 watts CW output. Tuned input, instantaneous RF Bias, dynamic ALC, parasitic killer, inrush protection, two lighted Cross-Needle meters, multi-voltage transformer.

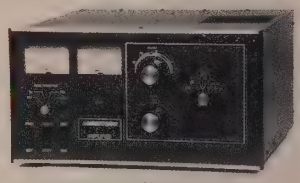
AMERITRON offers the best selection of legal limit amplifiers

AL-1500 $2469.95

Ameritron's most powerful Linear... single 3CX-1500/8887

Herculean *Eimac*® 8877 ceramic tube. It's so powerful that 65 watts drive gives you the full legal output – and it's just loafing because the power supply is capable of 2500 Watts PEP.

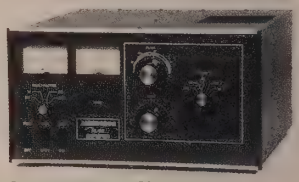
AL-1200 $2069.95



Single 3CX1200A7 linear Amp

Get ham radio's toughest tube with the Ameritron AL-1200 – the *Eimac*® 3CX1200A7. It has a 50 watt control grid dissipation. What makes the Ameritron stand out from other legal limit amplifiers? The answer: A super heavy duty power supply that loafs at full legal power – it can deliver the power of more than 2500 watts PEP two tone output for a half hour.

AL-82 $1999.95



Dual 3-500ZG linear

This linear gives you full legal output using a pair of 3-500s. Most competing linears using 3-500s can't give you 1500 Watts because their lightweight power supplies can't use these tubes to their full potential.

AMERITRON's legal limit amps are 18 x17x10 inches and weigh approx. 77 lbs. All use a super heavy duty Hypersil® power transformer capable of 2500 WATTS!

ATP-100 ADL-2500 ADL-1500 QSK-5 ICP-120/240 AWM-30 ATR-30

ATP-100 Tuning Pulser safely tunes an amp Prevents overheating, tube damage, power supply stress & component failure **$49.95**

ADL-2500 Fan cooled 2500 W dry dummy load Quiet fan. 2500 Watts average power for 1 min. on, 10 off. 300W cont. SWR below 1.4 ..... **$189.95**

ADL-1500 Dummy Load with container and oil Oil cooled, 50Ω load handles 1500W for 5 min. SWR under 1.2 to 30 MHz. Low SWR to 400 MHz **$69.95**

QSK-5 Pin diode transmit receive Switch Connects externally to most HF amps. Handles 2.5 kW PEP, 2 KW CW. 6X faster than vacuum relay..... **$329.95**

ICP-120/240 In-rush current protectors Stops power-up inrush current. Absorbs momentary high-voltage spikes to an amp. ICP-120 for 110-120V; ICP-240 for 220-240V.....ea. **$79.95**

AWM-30 Precision SWR Wattmeter Gives true active peak/average readings. Lighted cross-needle meter. 3000/300 Watt ranges..... **$139.95**

ATR-30 *True Legal Limit* **Antenna Tuner** True high power even on 160M where most others fail. Edge wound, silver-plated *AirCore*™ inductor..... **$549.95**

RCS-8V Remote Coax Switch Replace 5 coax feedlines with a single coax. 1.2 SWR at 250 MHz. Useable to 450 MHz. 1 kW at 150 MHz... **$139.95** **RCS-4** 4 position remote switch..... **$129.95**

RCS-4 ARB-702

ARB-702 Amp-to-radio interface Protects costly transceivers from damage by keying line transients, steady state current & excessive voltages. For Icom, Kenwood or Yaesu .....ea. **$39.95**

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MIRAGE

Turn your mobile, base or handheld into a 160 Watt powerhouse and talk further, longer, clearer . . . All modes: FM, SSB, CW . . . GaAsFET preamp . . .

The MIRAGE B-5016-G gives you 160 Watts of brute power for 50 Watts input on all modes -- **FM, SSB or CW!**

B-5016G
$269.95

Power Curve – typical B-5016-G output power								
Watts Out	130	135	140	145	150	155	160	160+
Watts In	20	25	30	35	40	45	50	55

Ideal for 20 to 60 Watt 2 Meter mobile or base. *Power Curve* chart shows typical output power.

Hear weak signals – the low noise figure (0.6dB) GaAsFET preamp has selectable 15 or 20 dB gain.

B-5016-G has legendary ruggedness. *We know of one that has been in constant use since 1979!*

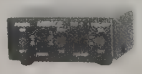
Heavy-duty heatsink spans entire length of cabinet and prevents overheating. Power transistors are protected by MIRAGE's Therm-O-Guard™.

Fully protected from high SWR and excessive input power. Has warning LED.

Has smooth adjustable Transmit/Receive switching with remote external keying.

Draws 17-22 amps @ 13.8 VDC.

Size: 12 x3 x 5-1/2 inches.



RC-1 Remote Control. On/Off, preamp On/Off, selects SSB/FM. 18 ft. cable **$45.95**

More 160 Watt, 2 Meter Amplifiers . . .

B-2516G For 10 to 35 Watt *mobile or base* stations. 160 Watts out for 25 Watts in **$269.95**

B-1016G MIRAGE's *most popular* dual purpose HT or mobile/base amplifier. 160 Watts out/10 Watts in. For 0.2-15 Watt radios..... **$339.95**

B-215G MIRAGE's *most popular* handheld amp. 150 Watts out for 2 Watts in; 160 Watts out for 3½ Watts in. For 0.25 to 5 Watt HTs **$339.95**

144/440 MHzAmp
45/35 Watt Dual Band

BD-35
$149.95

Power Curve – typical BD-35 output power								
Watts Out (2 Meters)	30	40	45	45+	45+	45+	45+	45+
Watts Out (440 MHz)	16	26	32	35+	35+	35+	35+	35+
Watts In	1	2	3	4	5	6	7	8

- Works with all FM handhelds up to 7 Watts
- 45 Watts on 2 Meters/35 Watts on 440 MHz
- Auto Band Selection • Full Duplex Operation
- Single connector for dual band radios
- Reverse polarity protection
- Auto T/R Switch • "On Air" LEDs
- 5 x 1¾ x 5 inches • FREE mobile bracket

6 Meter 150W Amplifier

A-1015G
$349.95

FCC Type Accepted – The A-1015G is the world's most popular all mode 50-52MHz FM/SSB/CW 6M amp. Built-in switchable receive preamp. 150 Watts out for 10 Watts in. For 1 to 15 Watt transceivers.

35 Watts for 2 Meter HTs

B-34G
(bottom)
$89.95

- 35 Watts out - 2M • All Modes: FM, SSB, CW
- 18 dB GaAsFET preamp
- Reverse Polarity protect • Works w/HTs to 8 W

B-34 35W, FM only, less preamp... **$69.95**

100 Watts for 2 Meter HTs

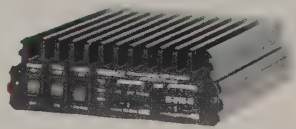
B-310G
$179.95

Power Curve – typical B-310-G output power								
Watts Out	25	50	75	95	100	100	100+	100+
Watts In	1/4	1/2	1	2	4	6	7	8

- 100 Watts out with all handhelds up to 8 Watts
- All modes: FM, SSB, CW
- Legendary MIRAGE Ruggedness
- 15 dB GaAsFET preamp
- Reverse Polarity Protection/SWR Protection

100 Watts Adjustable – HT or mobile

B-510G
$209.95



Use any 2 Meter HT or mobile up to 50 Watts and get the same 100 Watt power output.

Low noise GaAsFET preamps

High gain ultra low noise GaAsFET preamps for improving the reception of weak weak signals.

Selectable gain prevents receiver overload and intermodulation. 15 to 22 dB gain. Less than 0.8 dB Noise Figure. Automatic RF switching up to 100 Watts.

Choose *In-Shack* model or *Mast-Mount* model to reduce loss. Rugged die-cast enclosures.

KP-1/10M 28-30MHz; in-shack model **$129.95**
KP-1/6M 50-54MHz; in-shack model..... **$129.95**
KP-1/2M 144-148MHz; in-shack model..... **$129.95**
KP-1/220 220-225MHz; in-shack model **$129.95**
KP-1/440 430-450MHz; in-shack model **$129.95**

KP-2/10M 28-30MHz; mast-mount **$179.95**
KP-2/6M 50-54MHz; mast-mount..... **$179.95**
KP-2/2M 144-148MHz; mast-mount..... **$179.95**
KP-2/220 220-225MHz; mast-mount **$179.95**
KP-2/440 430-450MHz; mast-mount **$179.95**

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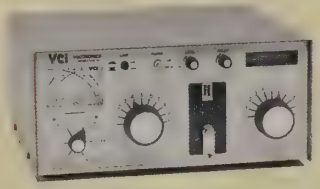
$149.95

World's most versatile 300 Watt Antenna Tuner

You'll get everything you've ever wanted: • precise inductance control that rivals roller inductors • the ability to match any real antenna • full 1.8-30 MHz coverage • peak reading backlit Cross-Needle Meter • 8-position antenna switch • built-in 50Ω dummy load • finest components around and world class quality.

Legal Limit Roller Inductor Antenna Tuner with SSB Digital Bar Graph



HFT-1500
$399.95

The HFT-1500 has three continuously variable components -- two 4.5 kV capacitors and a roller inductor controlled by a precision crafted crank handle and a gear-driven 5-digit counter. Tune any antenna 1.8-30 MHz, lighted D'Arsonval Cross-Needle SWR/Wattmeter, 28uH roller inductor, 4:1 2.5 kW balun and 20 segment SSB Bargraph display.

More Fine Vectronics Amateur Products

AT-100 Tuned Active SWL Antenna..... **$79.95**
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DL-300M 300 Watt Dry Dummy Load..... **$44.95**
DL-650M 1500 Watt Dry Dummy Load..... **$74.95**
DL-2500 2500 W Dry DL w/cooling fan **$179.95**
VC-300M 300 Watt Mobile Tuner **$99.95**
VC-300D 300 Watt Tuner w/digital graph... **$179.95**
HPF-1 High Pass TVI filter 52-550 MHz..... **$24.95**
HPF-2 Deluxe high pass TVI filter..... **$29.95**
PM-30HF 1.8-60 MHz SWR/Wattmeter **$79.95**
PM-30UV 144/220/440 MHz SWR/Wtmtr..... **$89.95**
LP-30 Low Pass filter, handles 1500 Watts..... **$49.95**
LP-2500 Low Pass Filter, 2500 Watts **$79.95**
PS-30F 25 amp power supply, 30A surge.... **$129.95**
PS-50F 35 amp power supply, 50A surge.... **$199.95**

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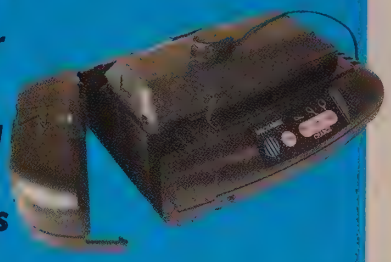
Universal Charger & Conditioner for versatile charging for nearly all of your battery packs



- **Charge almost all of your NiCD & NiMH** battery packs for your handhelds, camcorders, cellular, and notebook computers.
- Auto 4.8V to 12V detection.
- Negative delta V driven **microprocessor** plus temperature probe.
- For **home and vehicle use.**
- **Car adapter included.**

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Universal Drop-in Charger & Conditioner for convenient charging

- Support both NiCD and NiMH battery packs from 4.8V to 12V auto detection.
- **Drop-in design.**
- Informative **digital LCD.**
- **Universal** design using unique and convenient to install cup.
- FLEX negative pulse **extends battery life.**
- 1 & 3 cycle **conditioning.**
- PowerShare feature allow **hassle-free banking.**

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Ultra high capacity, memory free NiMH battery packs available in a wide selection

- Ultra high capacity
- **No memory** effect.
- Maha's legendary **quality.**
- Environmental friendly.
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- **Great selections.**

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Rechargeable Consumer AA NiMH battery cells plus intelligent rapid charger & conditioner

- Maha Rechargeable Consumer AA NiMH battery cells have a **ultra high capacity of 1350mAh** 1.24V. Great for handheld radios, FRS, backups, digital cameras, radio controlled toys, etc.
- Compatible **rapid charger and conditioner,** MH-C204F, also available for 2 or 4 batteries.
  - Battery **charged in 1-3 hours.**
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1.8-170 MHz SWR Analyzer™

The MFJ-259B

If you are serious about performance ... you Need one of these!

You've spent a lot of time and money on your antenna system, so why not make sure it's giving you top performance? An MFJ SWR Analyzer will do that – plus, it will make you very popular because all of your Ham buddies are going to try to borrow it!

MFJ-259B
$239.95

The MFJ-259B is a complete Ham radio test station including – Frequency Counter, RF signal generator, SWR Analyzer™, RF Resistance and Reactance Analyzer, Coax Analyzer, Capacitance and Inductance Meter and more!

Take the frustration out of getting your antennas properly tuned up for maximum performance. Gone are the days of using a conventional, sometimes questionable, SWR meter. You will no longer have to drag your rig (RF source) out into the yard. No more risking a heart attack running in and out of the house or up and down the tower to make those seemingly endless readings and adjustments.

The MFJ-259B is an all-in-one unit, with a built-in RF source so you can take it to the antenna, take one reading to get a complete picture of your antenna performance, and make all tuning adjustments on the spot.

Super EZ to use! Connect the feed line, set the bandswitch and tune the dial -- just like a transceiver. All information is clearly displayed instantly on the large, easy-to-read, 2-line LCD screen and side-by-side meters.

Read antenna SWR & Complex Impedance from 1.8-170MHz. Complex Impedance can also be read as series resistance and reactance (R+jX) or as magnitude (Z) and phase (degrees).

When tuning transmission lines or making up phasing harnesses for stacking antennas, you can quickly determine exact 1/4 or 1/2 wavelengths. You can also determine the velocity factor, coax cable loss in dB, length of coax and distance (in feet) to a short or open in coaxial cable.

Read SWR, return loss and reflection coefficient at any frequency simultaneously, at a glance,. Also inductance and capacitance. at RF freqrencies.

The MFJ-259B has a built-in frequency counter, Ni-Cad charger circuit, battery saver, low battery warning, and smooth reduction drive tuning.

Overall, Here's what you can do

- Find true resonant frequency of antenna.
- Trim dipoles and verticals.
- Adjust your Yagi, quad, loop and others, change antenna spacing and height. Watch SWR, resistance & reactance change instantly. You'll know exactly what to do, simply watch the display.
- Perfectly tune critical HF mobile antennas in seconds for super DX -- without subjecting your transceiver to high SWR.
- Measure your antenna's 2:1 SWR bandwidth on one band, or analyze multiband performance over the entire spectrum 1.8-170 MHz!
- Check SWR outside the ham bands without violating FCC rules.
- Take the guesswork out of building and adjusting matching networks and baluns.
- Accurately measure distance to a short or open in a failed coax. Measure length of a roll of coax, coax loss, velocity factor and impedance.
- Measure inductance and capacitance.
- Troubleshoot and measure resonant frequency and approximate Q of traps, stubs, transmission lines, RF chokes, tuned circuits and baluns.
- Adjust your antenna tuner for a perfect 1:1 match without creating QRM.

Take it anywhere

Fully portable, take it up towers, to remote sites, or on DX-peditions. It uses 10 AA or Ni-Cad batteries (not included) or 110 VAC with MFJ-1315, $14.95. Its rugged, all metal cabinet is a compact 4" x 2" x 6¼".

How good is the MFJ-259B?

Many manufacturers use them in their labs and on production lines – saving thousands of dollars in instrumentation costs.

***plus* – an additional model with E-X-P-A-N-D-E-D Frequency Coverage & Added Features**

SWR Analyzer Accessories

MFJ-66 $19.95. **Dip Meter Adapter.** Plug a dip meter coupling coil into your MFJ SWR Analyzer™ and turn, it becomes a sensitive, accurate dip meter. Set of two covers 1.8-170MHz.

MFJ-29C $24.95. ***Genuine* MFJ Carrying Case.** Tote the MFJ-259B anywhere with this custom carrying case. Wear it around your waist, over your shoulder, or clip it onto the tower while you work. Has back pocket for carrying dip coils, adapters & accessories. Made of special foam filled fabric to cushion blows and deflect scrapes. Protect knobs, meters and displays from harm.

MFJ-731 $89.95. **Tunable Measurement Filter™.** Allows accurate SWR and impedance measurements 1.8-30 MHz in presence of strong RF fields. Has virtually no effect on measurements. Works w/all SWR analyzers.

MFJ-99 $54.95. Accessory Package for MFJ-259/B/249/B/209. Includes 29C carrying case, 66 dip meter adapter, 1315 110 VAC adapter. *Save $4.90!*

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NEW!

MFJ-269 SWR Analyzer™

Covers 1.8-170 MHz plus 415-470 MHz

Looks identical to and has all the features of the MFJ-259B PLUS...

- Covers 1.8 to 170 MHz plus **415 to 470 MHz**
- Built-in **CoaxCalculator™** -- calculates coax length in feet given coax length in electrical degrees and vice versa, and any velocity factor (great for building matching sections and phasing lines for multiple antenna set-ups).
- New 12-bit A/D converter gives much better accuracy and resolution than common 8-bit A/D converters.

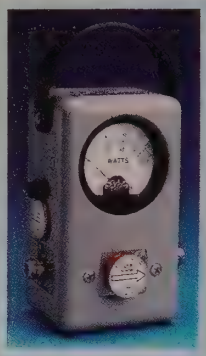
New 1.8 to 170 MHz Range features

- Read Complex Impedance as series equivalent resistance and reactance (Rs+jXs) or as magnitude (Z) and phase (degrees). Also reads parallel equivalent resistance and reactance (Rp+jXp).
- Measure SWR and loss of coax with any characteristic impedance from 10 to over 600Ω, including 50, 51, 52, 53, 73, 75, 93, 95, 300, 450Ω .

415 to 470 MHz Range features

- Read SWR, return loss, reflection coefficient simultaneously, and cable loss in dB and match efficiency.
- Has LCD logarithmic SWR bargraph and SWR meter for quick tuning.

MFJ-269
$319.95



BIRD Electronic Corporation

43 THRULINE® Wattmeter

Measures *incident* & *reflected* power in coaxial transmission lines with ±5% of full scale accuracy; insertion VSWR is less than 1.05.

Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged, durable aluminum case.

Supplied with SO-239 Quick Change (QC) type connectors w/opt. N and BNC types available.

Optional plug-in elements provide a wide choice of frequency ranges from 2–1000MHz, with power levels up to 5KW from 2–30MHz and up to 1KW from 30–1000MHz. Select one or more elements now, add others as needed. 6⅞"h x 5⅜"w x 3⅜"d, 3 lbs **$276.95**

4431 THRULINE® Wattmeter

Same as 43, has built-in variable RF signal sampler to provide adjustable low level signal sample for counters, scopes, analyzers. **$487.95**

43P Peak Reading Wattmeter

Same versatile functions as the 43, but incl. switch selectable Peak Reading (PEP) capability. Uses same plug-in elements, QC connectors and accessories. Requires two 9V batteries **$416.95**

See Price List for BIRD accessory pricing

TABLE 1 Standard BIRD Elements

Power Range	Frequency Bands (MHz) 2-30	25-60	50-125	100-250	200-500	400 1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power BIRD Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

Variable RF Signal Samplers

Stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control.

AES CANNOT export Bird products.

STARTEK FREQUENCY COUNTERS

STARTEK ATH Series Frequency Counters **are Subcompact, Pocket-size units, designed for ease of use and dependable operation. The Low Cost of these instruments belies the Quality Construction and innovative features found throughout.**

STARTEK **counters are used to find transmitting frequencies, locate RF sources, check all sorts of transmitting equipment for operation and frequency calibration. They are used with antenna analyzers for antenna tuning and to check/monitor the output frequency of transmitters, signal generators. etc.**

ATH series **counters have High-Speed Response and a special AUTO TRIGGER & HOLD feature, They can display and hold the frequency of a signal in less than 1/10 second. All have two MMIC amplifiers and ultra high sensitivity – less than 1 mV over most of the range. All have anodized aluminum cabinets with machine thread screws, auto polarity power input (9-12VDC), 6 sample times, a manual HOLD switch, Ni-Cad batteries & 110V AC adapter. Made in the USA.**

ATH-15 1–1500 MHz. 2", 10 segment signal strength Bar Graph, low battery indicator.....**Closeout $189.95**

ATH-30 1–2800MHz. Signal strength Bar Graph, low battery indicator, reset control & ONE-SHOT feature (single read & hold, does not allow subsequent signal to displace reading, switch selectable) **$249.95**

ATH-50 5–2800 MHz (2.8GHz). Has HIGH IMPEDANCE input (1 megohm) from 5 Hz to 50 MHz that can be used with probe without excessive circuit loading. Also Bar Graph, low battery indicator, ONE-SHOT and reset control. This compact model does more than most bench counters..... **$299.95**

OPTION HST-15 High accuracy option. ±0.2 PPM TXCO timebase, 18-40°C. Order the ATH-30/50 counters with this option..... additional **$100.00**

BAND PASS FILTERS Four filters available to extend readability distance: **LP-60** DC-60MHz; **BP-150** 130-500MHz; **HP-400** 400-1500MHz; **HP-800** 800-2000MHz..... each **$49.95**

ACCESSORIES - See Price list for complete listing.

STARTEK Help Line: (954) 537-5577

DIAMOND ANTENNA

SWR/Power Meters

Five models, measure power & SWR with 5–10% of F.S. accuracy. Illum. meter, sensor switch, LED indicator. Power ratings for intermittent oper. For contin., ratings vary with freq. SO-239 connectors on all except SX-1000 (type-N). SX-600 & SX-1000 are dual-band. 6"w x 2½"h x 4"d, 2 lbs.

SX-100 1.6-60MHz, 30/300/3kW ranges ... **$134.95**
SX-200 1.8-200MHz, 5/20/200 ranges **94.95**
SX-400 140-525MHz, 5/20/200W ranges..... **114.95**
SX-600 1.8-160MHz and 140-525MHz, 5/20/200W ranges **169.95**
SX-1000 1.8-160MHz and 430-1300MHz, 5/20/200W ranges **214.95**

New! Cross-Needle SWR/POWER Meters
Indicate forward and reflected power and SWR simultaneously. 50Ω impedance, SO-239 connectors, 10% F.S. accuracy, 3.3"w x 3.4"h x 3.7"d, 9 oz

SX-20C 3.5-30/50-54/130-150MHz ranges; 30/300W (5W min)... **$89.95**
SX-40C 144-470 MHz (220 MHz with correction factor); 15/150W (3W minimum power) **$79.95**

MIRAGE

SWR/Power Meters

Three models, all measure RMS & peak forward & reverse power & SWR, directly without charts or calculations. Negligible insertion loss. Remotable coupler, SO-239 connectors. Requires 9V battery, or AC adapter. Low batt. indicator. 5¾"x 4½"w x 5¾"d, 3½ lbs.

MP-1 1.8-30MHz; 25, 200, 2KW ranges..... **$219.95**
MP-2 50-200MHz; 50, 500, 1.5KW ranges.... **219.95**
MP-3 425-450MHz; 5, 50, 150W ranges..... **249.95**

Bel MERIT

DX-405 Multi-func. Multimeter • 10 func/39 ranges • 3½ digit, manual ranging • Freq. meter, to 20MHz • 0.25% DCV basic accuracy • Measure voltage, current, resistance & diode • Contin. beeper • Data hold • Auto power off • Input warning • Tilt stand w/lead holder • Holster • 4"w x 7.5"h x 1.5"d, 1.5 lb **$69.95**

DX-355 Digital Multimeter
Designed for Industrial Heavy Duty – All Current Range Fused – Extensive Overload Protection • 0.25% DCV Basic accuracy • Measure voltage, current, resistance, diode and frequecy up to 20MHz • True RMS reading • Data hold • Auto power off • Tilt stand with lead holder • Protective holster • 4"w x 7.5"h x 1.5"d, 1.5 lbs..... **$74.95**

DM-80 Pocket Digital Multi-meter 3200 count • 32 segment bargraph • Auto & manual ranging • Auto power off • Data hold • Range • Voltage, AC/DC 450V • Current, AC/DC 300mA • Resistance, 30MΩ • Diode test • Continuity beeper • Over range indication • Low batt. mark auto polarity • Carrying case incl. • 2"w x 4.1"h x 0.4"d, 3.2 oz..... **$34.95**

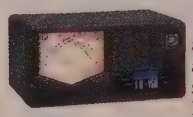
YAESU

SWR/Power Meters

YS-60 Monitors average (CW) and peak (SSB) transmitter power and VSWR. Covers 1.6 to 60MHz, up to 2KW. Meter ranges: 0/200 & 2000W. 50Ω impedance, SO-239 connectors. Requires 12V DC for meter lamps & internal circuits. 4¾"w x 2¾"h x 3½"d, 1½lbs **$129.95**

YS-500 Similar to YS-60, but covers 140–525MHz, 4/20/200W ranges..... **$109.95**

DAIWA Industry Co. Ltd



CN-101 Cross-Needle Power & SWR Meter Covers 1.8 to 150MHz, rated at 1500W from 1.8-60MHz and up to 1000W at 144MHz. Shows Forward and Reverse power and VSWR simultaneously. Three Power Ranges: 5/150/1500W (RMS or PEP); ±10% of full scale accuracy. SWR detection sensitivity: 4W minimum. 50Ω impedance, SO-239 connectors. 6"w x 3"h x 3⅞"d, 1½ lbs..... **$99.95**

CN-103M Cross-Needle Power/SWR Meter Same as CN-101, but covers 140-525MHz & rated at 200W. Two Power Ranges: 20/200W (RMS or PEP) **$99.95**

CN-410M Compact Cross-Needle Power & SWR Meter For mobile or base use – covers 3.5 to 150MHz. Two power ranges: 15/150W forward & 50/5W reflected. Backlighted meter shows forward/reverse Power and VSWR simultaneously. SWR detection sensitivity: 3W mini. 50Ω imped., SO-239 connectors. Mounting bracket incl. 2¾" x 3"d x 3⅞"d, 10 oz.... **$124.95**

CN-460M Cross-Needle Power/SWR Meter Same as 410, but covers 140-450MHz **$124.95**

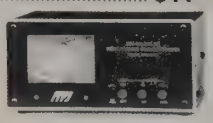
Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

MFJ ENTERPRISES, INC. SWR/Power Meters

864 (bottom) Covers 1.8 to 60MHz, 144MHz & 440MHz bands. Dual sensors, connect an HF & VHF/UHF rig at the same time. Monitor SWR and power of either. Lighted cross-needle meter indicates 30/300W forward and 6/60W reflected power simultaneously. Uses 12V DC for meter light. 7¼"w x 2½"h x 2¼"d **$84.95**

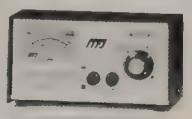
862 (middle) Similar to 864, but for 144MHz, 220MHz & 440MHz. Ranges: 30/300 watts forward & 6/60 watts reflected. 5¾"w x 2½"h x 2¼"d **$54.95**

860 (top) Similar to the 864, but covers HF – 1.8 to 60MHz. Ranges: 30/300 watts forward and 6/60 watts reflected. 4½"w x 2¼"h x 3"d..... **$44.95**



815B Features large 3" cross-needle meter. Gives accurate SWR & peak or ave. power readings from 1.8–60MHz. Ranges: 200/2000W forward & 50/500W reflected. Push buttons 12V DC for meter light. 7¼"w x 2½" h x 2¼"d.. **$79.95**

817 Looks & features similar to 815B but covers 144 & 440MHz bands. Power Ranges: 200/20 forward & 50/5W reflected. 7¼"w x 2½"h x 2¼"d **$89.95**



812B Indicates forward & reflected power on 2M & 220MHz & SWR 14–220MHz, plus field-strength 1–220MHz. Ranges: 30/300W ranges & 4½"w x 2¼"h x 3"d **$34.95**

816 Indicates forward and reflected power from 1.8 to 30MHz. Ranges: 30/300W. 4½"w x 2¼"h x 3"d **$34.95**

GrandMaster™ 3¼ x 1¼" meter, forward & reflected. 3 ranges. 13.8V/110V. 7½"w x 3⅛"h x 4¼"d.

870 (HF) Covers 1.6 to 60MHz. Power ranges: 30/300/3000W..... **$124.95**

872 (HF/VHF) Covers 1.8 to 200MHz. Power ranges: 5/20/200W..... **$94.95**

873 (VHF/UHF) Covers 125 to 525MHz. Power ranges: 5/20/200W **$104.95**

874 (HF/VHF/UHF) Covers 1.8 to 525MHz. Power ranges: 5/20/200W **$159.95**

MISCELLANEOUS

850 Line Voltage Monitor Plug into any 110V AC outlet and monitor line voltage on an expanded 95 to 135 Volt scale. 2¼" x 2¼"x 1½"..... **$19.95**

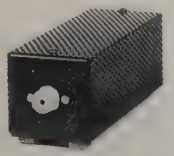
204B Antenna Bridge Quickly optimize 1.8-30MHz antennas for peak performance. Portable - take it to an antenna site. Determine if an antenna is too long or too short, measure resonate freq. & resistance to 500Ω. Built-in resistance bridge, null meter, tunable oscillator-driver. Uses 9V batt. 4"h x 2"w x 2"d **$79.95**

DUMMY LOADS OIL FILLED

250 Versaload 50Ω oil-filled dummy load providing low VSWR to 400 MHz. Rated at 1 KW CW or 2KW PEP for 10 min., with 50% power rating for 20 min. & 200W CW (400W PEP) contin. 7¼"h x 6¾" dia **With oil $59.95**

250X same, but no oil..... **$39.95**

DRY LOADS



Air cooled, non-inductive 50Ω resistor mounted in a metal housing. Full rated load for 30 sec. w/de-rating curve to 5 min.

260C (HF/VHF) Rated at 300W. 1:1 SWR to 30MHz, .5:1 to 650MHz. 2½" x 2½" x 7".... **$34.95**

260CN With type "N" connectors **$39.95**

264 (UHF) Performs from 1.3 to 650MHz, usable to 750MHz. Rated at 1.5KW for 10-seconds and 100W for 10-minutes. 3"w x 3"h x 9"d..... **$69.95**

RF Applications, Inc. www.rfapps.com

Affordable... High Performance & High Quality RF Power Measurement Systems

P-3000 HF Power & VSWR Indicator

Microprocessor based for fast, accurate power & VSWR readings from 1.8-30MHz & 15-2950 watts – without adjustments or calibration. *Three separate instruments in One:* Peak Digital Power Display, VSWR Display w/Alarms and 10-LED Instantaneous Power Bargraph. During high VSWR conditions a relay can interrupt the control line to linear to reduce chance of damage. Separate remote directional coupler locates up to 6' away. 50Ω input and output, SO-239 conn. Requires 12V DC @ 250mA. *Display:* 6½"w x 5¼"w x 2¼"d; *Coupler:* 4½"w x 3¾"h x 2¼"d, 6 lbs total..... **$299.95**

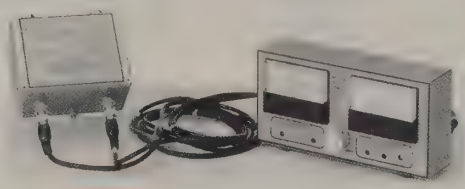
VFD Wattmeters

Features a 2 line by 16 character vacuum fluorescent display, tuning and operate modes and a settable VSWR limit. Provides a real time peak and hold display of your actual power and VSWR every time you transmit. The VFD's 65 element bargraph gives you better resolution than a meter, and you can select a quick update for the displayed power (Tune Mode). The VFD's sensor uses large cores that will not saturate. This unit also features a settable alarm indication to let you know that your VSWR has exceeded a preset limit. **Display:** 5.75"w x 3.0"h x 2.0"d. **Coupler:** 4"w x 3.5"h x 2.0"d.

VFD-HF 1.8 to 30MHz, 15 to 2955W **$249.95**

VFD-VHF 50 to 225MHz, 5 to 300W **$249.95**

Vanity option, VSWR alarm relay, and power monitor options are available directly from RF Applications at additional cost.

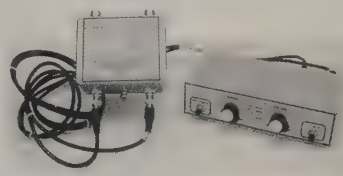


P-2000A RF Power & VSWR Indicator

For HF applications from 1.8 to 30MHz and up to 2000W RF output. It has an adjustable meter response time and uses the same remote coupler as the P-3000 unit. An adjustable VSWR setting and a relay are provided that can be used to automatically disable an amplifier under high VSWR conditions. *Display:* 8"w x 4¼"h x 2½"d; *Coupler:* 4½"w x 3¾"h x 2¼"d..... **$299.95**

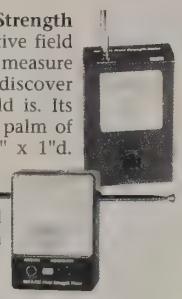
Match Alert™ VSWR Monitor & Alarm

A microprocessor monitors VSWR and provides a fast visual and electrical alarm if any of eight different dip-switch selectable VSWR presets are exceeded. Covers 1.8 to 30MHz and is rated at 3KW. A relay contact is available for control of an external function such as shutting down an amplifier, etc. 11-16V DC **$129.95**



P-2000CW RF Power/VSWR Indicator

Uses an audible Morse Code interface to report the vaalues of forward and reflected power. The values are stored during and at the end of each transmission and can be reported via CW while on the air or after the transmission. If the VSWR exceeds a preset value, the operator is alerted with the Morse "V" character, and a relay can provide control to disable an amplifier, etc. Covers 1.8-30 MHz and is rated 5W to 2000KW. 12V DC. **$249.95**



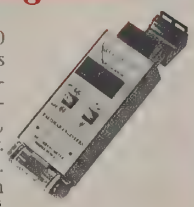
801 Super Compact Field Strength Meter (left) You can read relative field strength from your antenna, measure antenna performance and discover how strong your antenna field is. Its super compact size fits in the palm of your hand, only 2¾"w x 3⅜h" x 1"d. Telescopic whip incl..... **$19.95**

802 Bipolar Field Strength Meter (right) Dual whips are included, 2¾"w x 4"h x1½"d. **$39.95**

844 VHF/UHF SWR/Power Meter Covers 144 and 440 MHz, handles 200W. Measures SWR/power in 3 ranges: 15, 60, and 200W. SO-239 connectors, insertion loss is 0.3 dB or lower with 50Ω impedance. Measures only 3¾"w x 3"h x 1¼"d. Easy to read multi-colored meter. Great for portable, HT or mobile rigs **$69.95**

224 2M FM SignalAnalyzer™ Measure signal strength over 60dB range; check/set FM deviation; measure ant. gain, beamwidth, front-to-back ratio, sidelobes, feedline loss. Plot field strength patterns, position ant., measure preamp gain, tune xmitters & filters. Use scope to analyze modulation wave forms; measure audio distortion, noise & peak deviation. Covers 143.5-148.5MHz. Head-phone jack, batt. (9V) check func. 4"x2½"x6¼" **$149.95**

PALOMAR Engineers



PCM-1 RF Current Meter

Measures current from 1 to 30 MHz. Clamp-on design allows check of: radial system for broken wires; antenna and currents on feedline, coax shields, and on wire up to ½" diameter. Ranges: 100ma, 1A, 5A ranges. Requires 9V battery. 6"w x 2"h x 2"d, 9 oz **$129.95**

NCG-3000 Bench SWR & Power Meter Covers range from 118 to 530MHz. Large illuminated meter. Power Ranges:5W–20W and 200W, both average and PEP. Requires 12V DC. 7½"w x 3¼"h x 4¼"d, 2 lbs..... **$99.95**

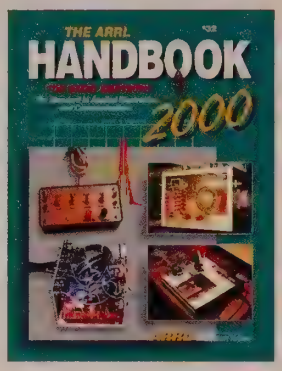
VANCO

Low Cost Meters

SWR-1 Field Strength or SWR meter Range: 3.5 to 150 MHz; Impedance: 52Ω; SWR: 1:1–3:1; Accuracy: 5%; Meter Sensitivity: 300uA. 5" RF pick-up antenna. 6"h x 2"w x 2⅞"d, 14 oz..... **$19.95**

SWR-3 SWR Meter Range: 1.7 to 30MHz; Impedance: 50–52Ω; SWR: 1:1–3:1; Accuracy: 55%; Meter Sensitivity: 300uA; 2½"x 3½"x 3", 6 oz.... **$14.95**

You'll Find it in a League Publication!



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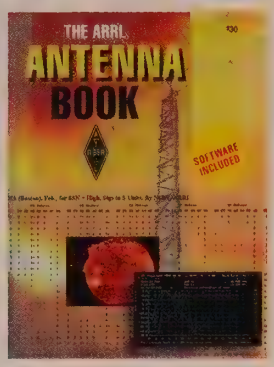

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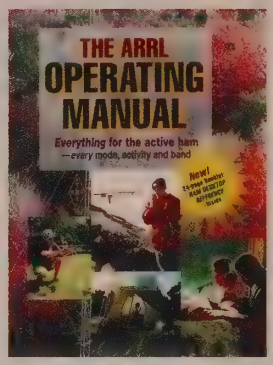

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- Clear, thorough explanations of electronics and communications theory.
- Projects for all levels of building experience.
- Invaluable reference material.

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ARR 101 $39.95

The ARRL Antenna Book—18th Edition
Design, build and install almost any imaginable type of antenna! Software included.

Select:

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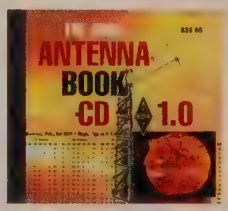
ARR 128 $39.95

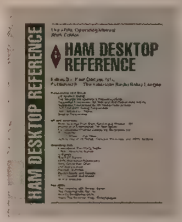


The ARRL Operating Manual 6th Edition
An indispensible guide for all active ham radio operators.

- The basics of operating a station,
- Where to use different modes on the various bands,
- Utilizing the Internet, DXing, contests and nets, PACTOR, AMTOR, APRS and other digital modes, satellite information, and shortwave listening,

and, answers to just about any operating-related question you have!

Bonus booklet included: ***The Ham Desktop Reference.***

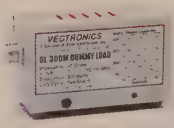


ARRL Operating Manual
ARR 240 $25

ARRL

The national association for AMATEUR RADIO

VECTRONICS DUMMY LOADS



DL-300M Dry Dummy Load Simulates an accurate 50Ω antenna up to 150 MHz. Test your transmitter without radiating a signal. Power handling curve rated at 300W for 15-seconds, to 100W for 40 seconds. VSWR <1.3:1 at 150MHz. 5"h x 2"d x 2⅞ "h, 8 oz..... **$44.95**

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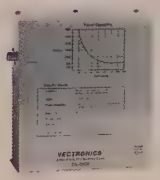

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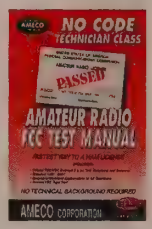

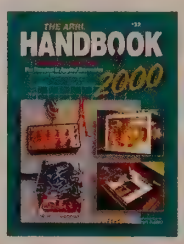

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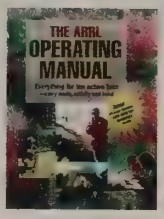

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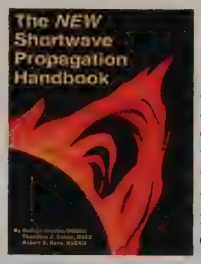

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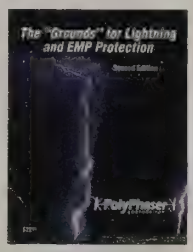

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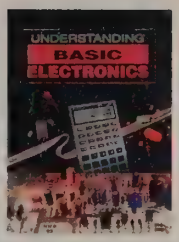

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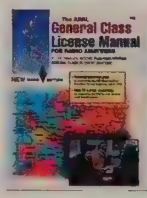

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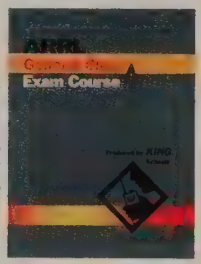

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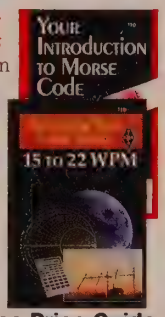

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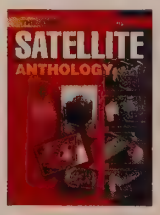

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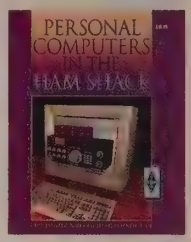

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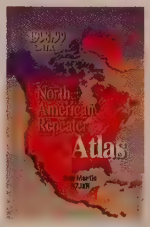

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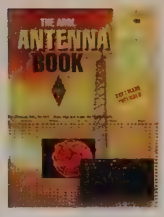

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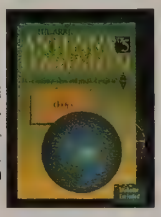

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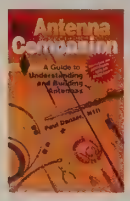

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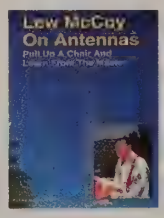

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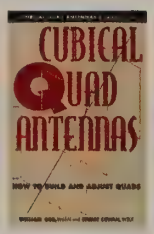

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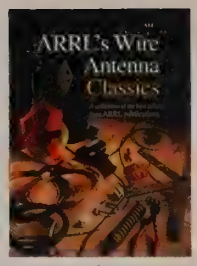

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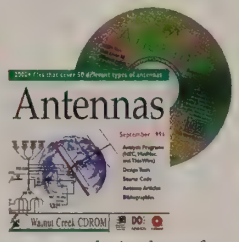

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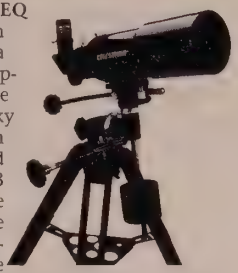
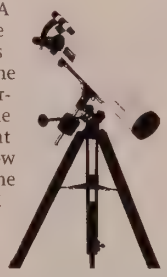


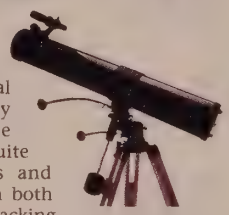
21072 Firstscope 80 EQ WA A wide angle, rich field telescope with a short tube that easily captures breathtaking, wide views of large deep-sky objects. Sturdy German equatorial mount and tripod. The weight (13 lbs.) & short tube make this a super portable instrument for easy traveling. Features include • 80mm (3.1") aperture • Focal length of 400mm • Focal ratio of f/5 • Fully multi-coated optics • High quality 6x30 Finderscope • Standard 1¼" accessories include: 25mm SMA eyepiece (16x), Focuser & 90° diagonal • Sturdy, adjustable wood tripod with accessory tray **$299.95**



31031 Firstscope 76 EQ A fine instrument for the beginning observer. It offers many of the advantages of the Newtonian design at 3" aperture. This model uses the German equatorial mount with setting circles and slow motion controls on both the right ascension (R.A.) and declination (DEC.) axes, making it easier to locate & track objects. Features include • 76mm (3") aperture • Focal length of 700mm • Focal ratio of f/9 • Standard 1¼" accessories include: 12.5mm H eyepiece (5.6x), 8mm H eyepiece (88x), 2x Barlow lens and Focuser eyepiece (16x), Focuser and 90° diagonal • 5x24 Finderscope • Sturdy, adjustable wood tripod with accessory tray • 15 lbs **$159.95**

31056 C150-HD Mounted on a rigid CG-4 equatorial mount. Counterweight, latitude scale, setting circles & slow motion controls on axes are standard. Features include: 150mm (6.0") aperture • Focal length of 1000mm • Focal ratio of f/7 • Standard 1¼" accessories include: 20mm Plossl eyepiece (50x) and Focuser • 6x30 Finder-scope • CG-4 EQ mount • Sturdy, adjustable wood tripod w/accessory tray • 41 lbs.... **$499.95**

11015 Celestar 8 Engineered for optical performance in an affordable, full featured Schmidt-Cassegrain telescope of large enough aperture to do serious deep-sky observing. Features: 8" (203mm) aperture • 2032mm focal length • f/10 focal ratio • 6x30 finderscope • Standard 1¼" accessories include: 25mm SMA eyepiece (81x), Star diagonal & visual back • Fork mount & wedgpod • 41 lbs..... **$1099.95**



31052 Firstscope 114 Premium A high quality, economical telescope w/superb optical system housed in a glossy black metal tube. The equatorial mount is quite stable, w/setting circles and slow motion controls on both axes for easy, smooth tracking. Features include • 14mm (4.5") aperture • Focal length of 900mm • Focal ratio of f/8 • 6x30 Finderscope • 1¼" Focuser with 0.96" adapter • 1¼" eyepiece • Sturdy, adjust. wood tripod w/accessory tray • 19 lbs **$349.95**

11051 G-5 An ultraportable telescope with optics made in the U.S.A. Serious performance, razor sharp images. Single axis motor drive operates on four D-cells and allows automatic tracking of celestial objects. Features include • 5" (127mm) aperture • Focal length of 1250mm • Focal ratio of f/10 • 6x30 Finderscope • 25mm (50x) SMA 1¼" eyepiece • 1¼" eyepiece • 1¼" 90° diagonal • Multi-coated Schmidt-Cassegrain optics (U.S.A. made) • Battery operated motor drive • German EQ mount with adjustable height • 24 lbs..... **$749.95**

11031 NexStar 5 Easy to set-up – no need to polar align, just set it on a table top. Using the hand control you can select a catalog, change the slew (motion) rate, get information on an object, or simply tell if an object is visable. The NexStar's database contains over 18,000 objects including all of the popular catalogs. Features include: 5" (127 mm) aperture • Focal length of 50" (1250mm) • Focal ratio of f/10 • 6x30 Finder-scope • 50x eyepiece • Camera: 25x • Schmidt-Cassegrain optics • Battery operated motor drive • 11" optical tube length • 17.6 lbs **$1199.95**

31034 Tabletop 76 Small, but powerful, this ultra portable telescope is ideal for traveling & quick set-up. The handy but sturdy table top mount provides steady viewing. Features include • 76mm (3") aperture • Focal length of 600mm • Focal ratio of f/8 • Standard 0.96" accessories include: 4mm SR (150x) and 2x Barlow lens • 5x24 right-angle Finderscope • 15 lbs **$99.95**

93720-40 Planishere and Planet Finder *It's Simple to use!* Spin disk until you've lined up the time of night your're observing with the time of month you're observing. Place planets using guide on the back. Facing south hold the guide overhead with "south" at the bottom of the chart, the actual star and planet positions will match. Measures 9'w x 11.5"h..... **$9.95**

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All come with straps, case or soft leather pouch and 1 year warranty.

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Model	Special Features	Magni-fication	Prism System	Field of View ft @ 1000yds	Wt. (oz)	Exit Pupil (mm)	Price
52 20 10	MiniQuick, Compact, T* Coated, Monocular	5x10	-	300	0.8	2.0	$89.95
52 20 28	Pocket-sized, Low Weight for hikers, etc.	10x25	Roof	285	7.1	2.5	$399.95
52 20 47	Pocket-sized, High Power, Center Focus, T* Coated	10x25	Roof	285	7.1	2.5	$479.95
52 30 09	Center Focus, Multi-layer Coated, Rubber Armored	8x30	Roof	360	15.9	3.75	$449.95
52 40 06	Center Focus, T* Coated, Rubber Armor, Wide-angle	7x42	Roof	450	28.2	6.0	$949.95
52 40 07	High Twilight Performance, Wide angle Eyepieces	7x45	Roof	151/453	42.3	6.4	$1199.95
52 40 13	Center Focus, T* Coated, Rubber Armor, Wide-angle	10x40	Roof	330	26.8	4.0	$969.95
52 56 59	High daylight/twilight peformance, Wide Angle	8x56	Roof	132/396	51.5	7.0	$1399.95

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Professional Series of astronomical telescopes are engineered and assembled with unparalleled structural and optical quality. These top-of-the-line models will give the owner many long years of reliable, dependable use and a lifetime of journeys to the stars. This series is highlighted by its professional quality format including • Professional format 1.25" Kellner eyepieces • Aluminum optical tube assembly • High quality glass optic objectives • Full-length, heavy-duty, variable-height aluminum tripods • Clock drive ready deluxe metal equatorial mounting systems • Professional format 6x30 finderscopes • 6-point finderscope adjustment systems • All-metal accessory trays • Pro counterweight system • Fine-adjustment controls. (78-0040, 78-0200)

Voyager® Series Engineered to exacting standards with exclusive features such as: The first astronomical zoom telescope • Penta mirror technology that yields right to left correct views of the night sky • High quality metal easy-track and metal equatorial mounts • Innovative adjustable aluminum tripods • Exclusive Rotary Power turret eyepieces. (78-9440, 78-9470, 78-9675)

New Voyager® Quality Dobsonian telescopes with all metal tube assemblies and innovative mounts will satisfy anyone just getting started to the advanced amateur astronomer. The new additions include a precision rack and pinion focuser and are engineered with a 1.25" format. (78-6000, 78-8000)

Accessories: (See Price Guide to match access. to correct telescope model)

78-0101 1¼" format 9mm Kellner eyepiece **$29.95**
78-0102 1¼" format 25mm Kellner eyepiece **$29.95**
78-0103 1¼" format erecting prism **$69.95**
78-0105 1¼" format 2x Barlow lens **$39.95**
78-0106 Clock drive (DC/battery power) **$89.95**

Model	Specifications	Focal Length	Eye-pieces	Magnifications	Features	Price
78-0040	40 x 90 Refractor	1,000	K25	40	Multi-coated oblective lens, Flexible fine tracking cables	$439.95
78-0200	200 x 4.5" Reflector	900	K9, K25	36, 72, 100, 200	9mm and 25mm eyepieces, 2x Barlow lens	$349.95
78-6000	48 x 6" Reflector	1,200mm	25mm	48	Dobsonian mount, 6 x 30 Finderscope, 6-point finderscope mount	$299.95
78-8000	48 x 8" Reflector	1,200mm	25mm	48	Dobsonian mount, 6 x 30 Finderscope, 6-point finderscope mount	$399.95
78-9440	440 x 60mm Refractor	700	8, 12.5	56, 88, 168, 263, 280, 440	Penta mirror, Easy Track® mount, Adjust. hardwood tripod, Erecting lens	$89.95
78-9470	470 x 60mm Refractor	750	Zoom, 8, 15	50, 94, 50-150, 250, 470	Penta mirror, Easy Track® mount, Adjust. hardwood tripod	$129.95
78-9675	675 x 4.5" Reflector	900	4, 12, 20	45, 75, 135, 225, 675	Clock drive equatorial mount, Adjust. alum. tripod, 6-point finderscope mount, Fine tracking	$229.95

Powerview® Truly the "best of both worlds." Contemporary styling and design combined with legendary Bushnell quality and durability. The easy-to-hold and easy-to-use aspect of these binoculars also converge to make Bushnell Powerview binoculars an excellent value for the general and outdoor user. Powerview comes with soft rubber covering and the patented "Insta-Focus®" system. Each binocular comes with a neck strap and carrying case. (13-0430, 13-1226, 13-1250, 13-2514)

Legacy® binoculars feature old world craftsmanship with new world styling. Designed for those who appreciate modern styling, but still want the unsurpassed performance of traditional optics. Legacy includes multi-coated optics, BAK-4 prisms, soft durable rubber armoring and gold trim. Designed with outdoor enthusiasts' needs in mind, the 8x24 and 10x24 compacts are O-Ring sealed and nitrogen purged for water/fog-proof protection. This line offers standard, zoom, high power, extra wide angle, and compact configurations along with sleek ergonomic styling, case, and neck strap. (12-1025)

InstaVision® This line features convenient focus free operation, amber-coated optics, and rubber armoring for durability. The InstaVision action package comes complete with a binocular belt pack case for convenient around-the-waist carrying. They also come equipped with Bushnell's exclusive Sportview® handstrap. (17-7351)

Falcon is feature packed and value priced. Perfect for sporting events, sightseeing, nature study, back-packing, concerts and theater. This line includes the Bushnell patented InstaFocus® focusing system, coated optics, carrying case, and strap. (13-0721, 13-3410)

Model	Special Features	Magni-fication	Prism System	Field of View ft @ 1000yds	Exit Pupil (mm)	Wt. (oz)	Adapt to Tripod	Price
12-1025	Compact, Rubber armored	10x25	Porro	262	2.5	8.3	No	$119.95
13-0430	LiteVision™	4x30	-	650	7.5	7.5	No	$19.95
13-0721	Compact	7x21	Porro	340	3	4.7	No	$39.95
13-1226	Compact, Folding roof prism, Camo	12x25	Roof	240	2.1	9.7	No	$29.95
13-1250	Standard, InstaFocus®	12x50	Porro	265	4.2	27	Yes	$59.95
13-2514	Compact, Folding	8x21	Roof	375	2.6	7	No	$24.95
13-3410	Standard, InstaFocus®	7x35	Porro	420	5	21	Yes	$29.95
17-7351	Wide angle, Handstrap, Belt pack, Focus-free	7x35	Porro	490	5	21	Yes	$49.95

The Pouch

A protective carrying case for H.T.'s made of water-resistant neoprene & nylon. "Bungee type" restraining-strap. Belt loop has secure "spear-in" clasp.

Make/Model	Pouch#	Price
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Above w/hi-pwr batt.	S-1	17.95
PR-52/222	PR	14.95
ALINCO		
DJ-C1T/C4T/C5T	AF-738	12.95
S11/S41/S46	P-5	14.95
G5T	32-5T	14.95
V5T	V-5T	14.95
195T	95T	14.95
280T	VX-3T	17.95
ICOM		
IC-2GXAT	2G	14.95
21/41AT	P-5	14.95
Q7	508	12.95
T2	T-2A	17.95
T8A	510	12.95
T22/T42	P-5	14.95
T81	510	12.95
W32	32-5T	14.95
KENWOOD		
D7A	DTX	17.95
TH-22A/42AT	SS	17.95
TH-G71A	G-71	17.95
TH-79A	S-1(2.7w)	17.95
TH-79A	S-2(5.0w)	17.95
UBX-LF14	P-4V	12.95
VC-HI	S-2	17.95
STANDARD		
C-156A	P-5	14.95
C-508A	508	12.95
C-510A	510	12.95
C-568A	P-5	14.95
YAESU - VERTEX		
VX-1R	1R	12.95
VX-5R	5R	14.95
VXF-10	XF-1	12.95

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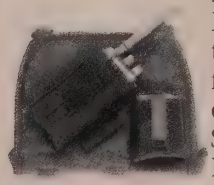
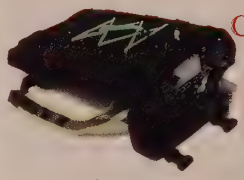
ChestPOUCH

CHESTB/S Double-ply cordura bib with adjustable, "fits-all" harness. Extra Pouch for battery. Big pocket for accessories on the back. Specify Radio for Pouch. $29.95



NCG Power Pocket
Provides portable power for Emergencies, Hamfests, Hiking, etc. The 12V @ 2 amp/hour sealed lead-acid rechargeable battery provides talk time, up to 6 times longer than standard packs. It recharges completely in 6 to 8 hours, with the supplied charger; Partial discharges can be recharged to 100% without the usual ni-cad memory effect. Radio conveniently plugs into included female adapter socket. Contained in a compact carrying case with a belt loop and shoulder strap. 3½"w x 1"d x 6½"h, 30 oz **$66.95**



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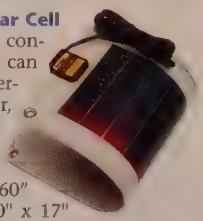

PPSC-32 Out of reach of conventional power? This cell can provide 32W of 12V DC operating and recharging power, and a built-in diode blocks reverse current flow during hours without sunlight. Approximately 17" wide by 60" in length; rolls up into a 10" x 17" package for storage. Completely flexible, waterproof and extremely durable. Versatile, can be mounted on a flat, curved or bendable surface **$394.95**

5.5 Watt Roll-up Solar Cell

PPSC-5 Same construction as the 32W model, but without he built-in blocking diode (not applicable to smaller cells), and size is 10" x 20". More suitable for lower use applications and would take approximately 2 afternoons to recharge a WorldPack Power Supply at a rate of 0.35 Amps. It's smaller size and weight make it ideal for packing it into remote areas or for charging smaller battery systems..... **$129.95**

PPSCA Cigarette plug adapter. Required for use with WorldPack Power Kits **$10.95**

Multi-Volt Regulated DC to DC Adapter

PPMMDC Adapts the 12V DC output of the WorldPack power supply to accommodate other equipment. Voltage can be varied to 1.5, 3.0, 4.5, 6.0, 7.5, 9.0, or 12 V. Comes with six different plugs, both positive and negative center tips, in a variety of standard sizes that will fit nearly any DC devices that require 500 to 700mA. Includes two female cigarette plugs for 12V. Useful with the solar cells – regulate the power directly from the solar cell into your DC device requiring 500 to 700 mA **$22.95**

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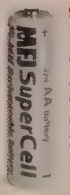
18 HamGear™ Tactical Chest Harness
(left) Perfect for rugged use, emergency radio operators and on-the-go hams! Use it for portable hamfest use, DXpeditions, field day, biking, hiking, etc. Made of durable heavy duty twill burlap, this interwoven fabric is water resistant and will cushion blows and scrapes. Adjustable shoulder straps. Harness is firmly held in place by stretchable interwoven elastic belt with snap hook and adjustable sliders supported by nylon straps. A 5 x 7 inch cargo pocket holds another radio, maps, etc..... **$29.95**

15 HamGear™ Belt Radio Holder
(right) Durable twill burlap pocket with elastic cord and velcro closure easily stretches over any HT. Belt slides easily through 2 x 3 inch loop..... **$14.95**



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92AA10 Super Ni-MH 10-pack..... **$24.95**

PowerHaus™ Rapid and Trickle battery chargers
Perfect for charging Ni-MH or Ni-Cd rechargable batteries used in your MFJ-259B SWR Analyzer or other equipment. Do NOT charge alkaline batteries. It has a removable dust cover and an AC 12 Volt, 800 mA wall adapter is included. Reverse Polarity Protection and a bright red LED indicator that shows charging status.

631(A) **Trickle Charger** Charges 2 to 4 NiMH or NiCd "AA" batteries in 14 hours..... **$9.95**

632 (B) **Rapid Charger** Quick charges 2 to 4 "AA" or "AAA" Ni-MH or Ni-Cd rechargeable cells in an hour or less..... **$19.95**

641 I/Y K

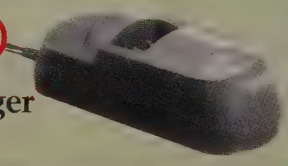
RapidBattery™ Universal Chargers
Provides both quick and trickle cycles & will charge NiCd or NiMH battery packs. Unique circuitry with LED indicators determines when the battery is fully charged and prevents damaging overcharging. Universal interchangeable charging slots for fast, simple drop-in charging. 3½" x 5½" x 3" **$49.95**

- **MFJ-641-I2** works w/ICOM batt. BP-131/BP-132
- **MFJ-641-I3** – ICOM BP-173/BP-180
- **MFJ-641-Y2** – YAESU FNB-10/11/12/17/27
- **MFJ-641-Y3** – YAESU FNB-31/FNB-33
- **MFJ-641-Y4** – YAESU FNB-40/41/49, FNB-V47
- **MFJ-641-K** – KENWOOD PB-6/7/8/9/11/30/32/33/34,KNB-5/6/7/5A/6A/7A/9A

KENWOOD

BC-15A Desk Charger

CLOSEOUT



Charges Kenwood PB-13, PB-14, PB-17 & PB-18 handheld batteries in 60 to 100 minutes.

BC-15A looks similar to model pictured.

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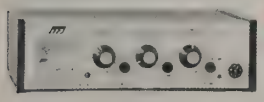
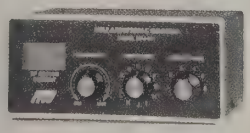
382 Deluxe *ClearTone™* Amplified Speaker Excellent 1W amplified speaker for QRP'ers, base station HT users or for oper. with rigs requiring more volume. Quality 3" speaker provides loud, powerful audio. Volume adjusts from barely audible to high. All metal cabinet, rubber feet & vinyl clad cover. Uses 9V battery (not incl.) or 110V AC with the optional MFJ-1312B ($12.95). Connecting cable included. 3½"h x 1¾"w x 4½"d..... **$39.95**

701 RFI Free Choke Kit Eliminate common RFI problems by winding offending cables around an RFI suppressing toroid. Includes 4 ferrite toroids, effective from .5-200MHz. Ea. separates into halves for easy winding on all types of cable: computer ribbon, TV coax, power cord, telephone wire, audio/video. Halves mount in snap-together plastic frame. For severe RFI problems & larger cables, multiples can be stacked for more effect.....(Pack of 4) **$14.95**



624D Deluxe Hybrid Phone Patch Interfaces telephone line with your rig to run phone patches. Easy to use, jumper selectable for all Kenwood, Icom, Yaesu and Alinco using an 8-pin microphone connector. Adapts to work with virtually any rig. Uses 12VDC, 9V battery or 110VAC with MFJ-1312B AC adapter ($14.95). 8"x 2"h x 6" **$119.95**



931 Artificial Ground Unit Eliminates the problems caused by an inadequate ground system when using random lengthwire antennas. Resonates an additional length of wire to act as a tuned counterpoise. Easier tuning, improved efficiency and a better radiation pattern. Covers 1.8 to 30MHz, RF ammeter tuning indicator. 7½"w x 3½"h x 7"d. *Not for antennas fed with coaxial cable* **$89.95**

1118 Deluxe Multi DC Outlet Connects to a battery or power supply & provides power distribution to multiple devices. 2 pair of heavy-duty 30 amp, 5-way binding posts for transceivers/amps. Individually fused and RF bypassed, rated 35 amps total. Also, 6 pair of RF bypassed 5-way binding posts for accessories, 15 amps total, master fuse. ON/OFF switch, LED power indicator, 0-25V DC voltmeter. Post spacing for dual banana jacks. Incl. 6' of 8 gauge cable with terminals. 12½"w x 2¾"h x 2½"d ... **$74.95**

1116 Similar to MFJ-1118 but without 30A posts. Provides eight RF bypassed 5-way binding posts. Voltmeter, ON/OFF switch and fuse **$49.95**

1112 Similar to MFJ-1116 but with five posts, no voltmeter or ON/OFF switch **$34.95**

315 Jaws Gripmatic™ Adjustable, foam padded jaws lock HT in place & secure it for the bumpiest rides. Protects any HT or cell phone from damage. Release button lets you quickly take your HT with you. Adjust. Flex-Neck™ provides convenient positioning. Suction cups mount Jaws Grip-matic™ to window. Tabs provide quick release **$14.95**

MFJ MFJ ENTERPRISES, INC.

Pre-wired Radio to TNC Cables

pre-wired for most 8-pin round microphone connectors figs and handheld transceivers.

$15.95 each

Some models may be Special Order!

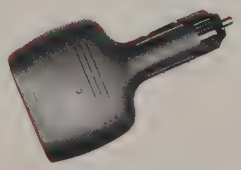
Radio / TNC Type	All MFJ TNCs and multimodes	KAM VHF[4] KAMHF/KP C3[5]/KP9612[5]	PK-232	PK900/PK96/ PK12/DSP232 /PacComm/others
Alinco[7]/ Standard HTs	MFJ-5022	MFJ-5022YV	MFJ-5022X	MFJ-5022
Icom[1]/Yaesu/ R. Shack HTs	MFJ-5024	MFJ-5024YV	MFJ-5024X	MFJ-5024B
Kenwood[2]HTs	MFJ-5026	MFJ-5026YV	MFJ-5026X	MFJ-5026
Yaesu R-series HTs	MFJ-5020	MFJ-5020V	MFJ-5020X	MFJ-5020R
Yaesu 8-pin	MFJ-5080	MFJ-5080YV MFJ-5080YH	MFJ-5080X	MFJ-5080
Icom 8-pin	MFJ-5084	MFJ-5084YV MFJ-5084YH	MFJ-5084X	MFJ-5084
Kenwood/Alinco 8-pin	MFJ-5086	MFJ-5086YV MFJ-5086YH	MFJ-5086X	MFJ-5086
Yaesu[8] 8-pin modular	MFJ-5080M	MFJ-5080MYV	MFJ-5080MX	MFJ-5080M
Icom[3] 8-pin modular	MFJ-5084M	MFJ-5084MYV	MFJ-5084MX	MFJ-5084M
Kenwood 8-pin modular	MFJ-5086M	MFJ-5086MYV	MFJ-5086MX	MFJ-5086M
Radio Shack 8-pin modular	MFJ-5088M	MFJ-5088MYV	MFJ-5088MX	MFJ-5088M
MFJ-8621 Data Radio 5-pin DIN	MFJ-5100	MFJ-5100YV[5] MFJ-5100YH[6]	MFJ-5100X	MFJ-5100

1. Does not include IC-W2A
2. Does not include 2500
3. Does not include IC-100H, IC-2700H
4. YV for KAM VHF port. YH for KAM HF port. Other Kantronics use YV models.
5. YV for KP9612, 1200 baud port
6. YH models for KPC9612/9600
7. Excludes DJ-100/120T/200/500
8. Excludes FT-50, FT-8000

Q-View QSL Card Holders

Proudly display your favorite QSL cards in these 12" x 40" clear plastic hang-up holders. Each holds (20) 3-1/2" x 5-1/2"cards. Packets open at center to receive cards easily

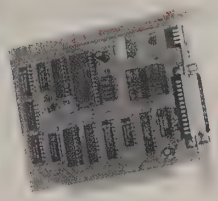
Pack of 3 (frames & displays 60 cards) – $12.95



P-212 2-Outlet Cigarette Plug Adapter Enables two 12 volt accessories to be used from one outlet **$6.95**

P-212B Dual Cigarette Socket Enables two 12 volt accessories to be used from one outlet, comes with replaceable 15 amp fuse..... **$9.95**

P-12R 2-Contact Cigarette Plug Solder type with twin contact ears, strain relief and easy grip end **$1.95**



UNIFIED MICROSYSTEMS

W9XT Contest Card for IBM™ & PC Compatible

W9XT A non-volatile 5" x 4½" card that plugs-into a single 8-bit PC slot to provide voice recording, playback and CW keying. Stores a total 60 seconds of voice audio divided into four 15 second messages. Samples at 8 kHz for high quality and natural sound. Does not use any disk space. For CW, the card frees up the PC port, and a relay allows operation with positive or negative keying. Works with all rigs and is compatible with most popular logging programs **$149.95**

CCC-4 & CCC-8 Contest Card Cable Semi-kit Comes wired & tested except for connectors to mic & transmitter. Includes 6' shielded cable, CW keying line & record switch (4 or 8 pin available) **$44.95** ea.

ums@nconnect.com

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Isobar – World's most advanced surge suppressors. They provide instantaneous (0ns) response to power surges. Isolated filter banks eliminate connected equipment interference "Cascade circuitry" provides increased surge protection and diagnostic LEDs.

Various Models: See Tripp Lite in the Price Guide

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JOHNSON

SS-100 Convenient, avoid theft! Radio slides in and out of mount instantly without having to attach or remove cables. The power, ground, antenna, and speaker leads connect and disconnect automatically! RF components are designed for a low SWR up to 500MHz. Adapts to most radios; the bracket adjusts to case size and can be conveniently attached above or below the radio unit **$79.95**
SS-101 Extra base for multiple vehicle use **$44.95**

GROTHE Sirens & Horns

VS-2 Emergency Vehicle Siren
Designed for the Volunteer Fireman, a quality built Wail-Yelp alarm that delivers big sound performance – 120Dba sound level at 4 ft. Frequency range: 600 to 1200Hz. Pre-wired with a 3-position switch (Yelp-Off-Wail), high efficiency waterproof horn speaker, 10 ft. cable, mounting bracket & hardware. 12VDC @ 1.5A, 2.7 lbs.... **$89.95**

VS-3 Vehicle P/A and Airhorn w/Rebroadcast
A big, powerful airhorn sound with four different sounds (no siren) calls attention to your vehicle. Delivers 120 Dba level at 4'. Locking down the microphone with the supplied rubber band, you can monitor sound from a mobile rig, scanner, etc. via the speaker outside. Includes horn speaker, mic, electronic center, 10' cable, mounting bracket & hardware. 12 VDC @ 1.5A..... **$129.95**

VS-4 P/A Emergency Vehicle Siren Contains P/A, Rebroadcast, Wail, Yelp, Pulse & Airhorn. P/A Override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes horn speaker, microphone, 3" x 3½" x 2" electronic center , 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5A..... **$139.95**

VS-2LS Siren–Light Combo A 1-unit siren/yelp alarm, revolving halogen or strobe light and window mount. Fits all cars, slides on top of car window and plugs into cigarette lighter. The power plug contains as an "on" LED and three position switch to select Yelp, Off or Wail modes. 12 VDC @ 5A. Specify amber, blue or red **$299.95**

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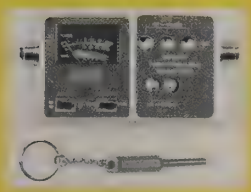
MFJ ENTERPRISES, INC.

ANTENNA TUNERS



922 VHF/UHF Dual Band Antenna Tuner Great for HTs, mobile rigs or amps up to 150W. Using the included tool, adjust your antenna system for a low SWR on VHF from 136-175MHz and UHF from 420-460MHz. Meter reads both SWR and power in two ranges: 60W or 150W. Only 4 x 2 x 1¼"- carry it in your car, on camping trips, etc **$79.95**

945E Mobile Tuner Covers 1.8 to 30 MHz, and rated at 300W PEP. Matches coaxial cable only. Extends mobile antenna bandwidth and eliminates having to stop and adjust the whip length when making frequency changes. Lighted Cross-Needle SWR bridge & Power meter with 50/300 and 5/30W ranges. 8"w x 2"h x 6"d..... **$99.95**

941E Versa Tuner II Covers 1.8 to 30 MHz and rated at 300W PEP. *Matches everything!* – coaxial fed dipoles, vees, whips, verticals, beams, random wires and balanced lines, has a built-in 4:1 balun. Lighted Cross-Needle SWR/Power meter with 300/50W and 30/5W ranges. Convenient 8-position antenna selector for 2 coax lines, random wire or balanced line or an external dummy load. 10⅝"w x 2⅞"h x 7"d **$109.95**

934 Antenna Tuner/Artificial Ground Makes a random wire an effective antenna. Combines the best features of the MFJ's 941E and 931 into one unit. A full-featured 1.8 to 30MHz, 300W antenna tuner with Cross-Needle meter and *Ground Matching* knob that lets you switch in inductance to bring an attached radom length wire to a low impedance current point, forming an artificial ground. 10⅝"w x 3½"h x 7"d **$169.95**

948 Has all the features of the 941E but without the dummy load. Has larger lighted peak reading Cross-Needle SWR/Power meter..... **$119.95**

949E Deluxe Versa Tuner II The same power, tuning and switching capability as the 941E. Has a larger, lighted peak or average reading Cross-Needle SWR/Wattmeter. *PreTune™* feature allows off-the-air tune-up into a built-in 50 ohm dummy load. 10⅝"w x 2⅞"h x 7"d..... **$139.95**

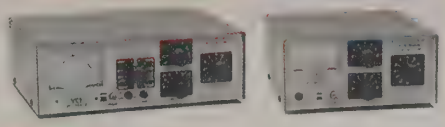
969 Deluxe Versa Tuner II Covers 6 thru 160 meters and rated at 300W. Features a roller inductor coil with a spinner knob and 3-digit turns counter. Lighted peak or average reading Cross-Needle SWR/ Wattmeter with 30/300W ranges. Tunes coaxial cable, random wire or balanced feedline, has a built-in 4:1 balun. QRM-Free *Pre-Tune™* feature allows off-the-air tune-up into a built-in 50 ohm 300W dummy load. Convenient 8-position antenna selector. 10½"w x 3⅞"h x 9½"d..... **$189.95**

962D Versa Tuner III Covers 1.8 to 30 MHz and rated at 1.5KW PEP. Matches coaxial fed antennas, random wire or balanced line, has a built-in 4:1 balun. Lighted peak or average Cross-Needle SWR/Wattmeter with 200/2000W ranges. Six position selector for two coax lines (direct or through tuner), random and balanced lines. 10½"w x 3⅞"h x 15"d **$249.95**

986 Differential-T Tuner™ Covers 1.8-30MHz & rated at 3KW PEP. Uses a broadband T-network w/roller inductor & differential capacitor. Tunes most antennas using only 2 knobs. Lighted peak or ave. reading Cross-Needle SWR/Wattmeter with 200/50W & 2000/500W ranges. Inductor spinner knob, 3-digit turns counter, 6-pos. antenna selector, external dummy load switch, 4:1 balun. 10¾"w x 4½"h x 15"d..... **$299.95**

989C Versa Tuner V Covers 1.8 to 30 MHz and rated at 3KW PEP. **Super duty Components.** Matches nearly every type of antenna. Roller inductor with spinner knob and three-digit turns counter. Lighted peak or average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges. Built-in 50Ω 300W dummy load, 3KW 4:1 balun and six-position antenna selector. 10¾"w x 4½"h x 15"d **$319.95**

VECTRONICS ANTENNA TUNERS

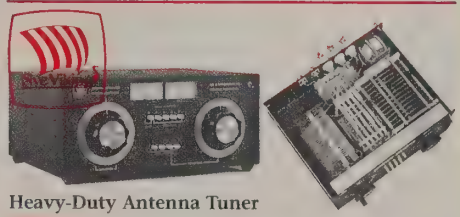


VC-300M Mobile Tuner (right) Compact, lightweight & economical for base or mobile use. Tunes verticals, dipoles, inverted Vs, beams & mobile whips fed by coaxial cable. Also tunes open wire feeders, balanced lines, or single wires. Covers 1.8 to 30 MHz at 300W continuous power. The dual-movement cross-needle meter simultaneously monitors RF power output & SWR. 7¼"w x 3½"h x 8¾"d, 2½ lbs **$99.95**

VC-300DLP Antenna Tuner (left) A quality, economical tuner. Covers 1.8–30MHz at 300W continuous power capability from 3.5–30MHz & 150W on 1.8MHz. Built-in dummy load, dual-movement cross-needle peak or average reading meter. Compatible w/almost any antenna – coax fed, balanced or single wire. Built-in 4:1 balun & six-position antenna selector switch. 10¼"w x 9½"d x 3½"h, 3½ lbs. **$149.95**

VC-300D Antenna Tuner (right) Same functions & specifications as the VC-300-DLP shown above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph meter display. A LEVEL and DELAY control has been added to calibrate the display to the meter, and to vary the delay response .. **$179.95**

HFT-1500 Antenna Tuner (left) Rated for 1500W from 1.8 –30MHz; 1000W (2KW PEP) on 160 & 10M. Features a cranked continuous roller inductor with a turns counter and vernier tuning on the antenna and Input capacitors. The dual-movement cross-needle meter shows average forward and reverse power and SWR; a 21-segment bargraph indicates peak power. A true RF directional coupler sensor is used for the wattmeter circuitry. Includes a built-in 4:1 balun for balanced antenna systems and 6 position antenna selector switch. 5½"h x 12½"w x 12"d, 10 lbs **$399.95**



Heavy-Duty Antenna Tuner

MB-V-A 1.8 to 30 MHz continuous tuning. Silver plated variable inductor with 25:1 vernier dial. 7kV variable capacitor and 15kV switch selected fixed output capacitors. Tunes most antennas. 1/4-wave length or longer from 40–2000Ω (some may not tune at 1.8 MHz). Automatic SWR metering without calibration. Separate automatically switched 300W/3KW RMS wattmeter. Quality 2½" backlit meters continuously display SWR and power. Silver plated 5-position pushbutton antenna. switch selects four antennas: two coaxial, single wire and balanced line, and bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω, and unbalanced output down to 20Ω. Requires 9V battery for meter and external 12VDC for meter lights. 14¾"w x 6¾ "h x 12¼ "d, 18 lbs **$879.95**

AH-4 Automatic Antenna Tuner *Fully automatic* – covers all amateur bands from 3.5MHz through 54MHz with a 23 ft. or longer wire antenna, or 7–54 MHz with optional AH-2b Antenna Element.

Compact yet durable, it measures only 6.7"w x 2.7"h x 9"d for easy installation in a variety of locations – outdoors, on a back porch or in your vehicle. Weather-resistant construction, using rubber gasket seals, enables operation in all conditions. Handles 120W PEP, requires only 5–15W for tuning.

Designed for use with ICOM HF transceivers. Just push the transceiver [TUNER] switch and the AH-4 automatically adjusts to the minimum SWR in less than 2.5-seconds. Up to 45 memory channels store settings to provide 1-second re-tuning. Supplied with mounting kit, 16 ft. control and coaxial cables, PL-259s. Requires 13.8 VDC. **$319.95**

AH-2B Antenna Element Provides 7–50MHz mobile operation when used with the AH-4 antenna tuner. Includes a sturdy bumper mount, 8.2 ft. antenna and necessary hardware **$299.95**

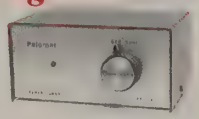
AMERITRON

ATR-30 *True Legal Limit™* **Antenna Tuner** Covers 1.8-30MHz, incl. all MARS & WARC bands. Designed for sustained RF output of over 1500W CW and 3000W SSB, also 160m. Uses High-Q, high-current, edge-wound arc-free roller inductor w/super heavy-duty 500pf capacitor in T-match network. Matches nearly any type of ant. using either coax or balanced feedlines. Cross-needle peak-reading SWR/Wattmeter with 3000/300W ranges measures peak or average forward/reflected power plus VSWR, illum. Incl. 3-core choke balun, 6-position ant. switch & 6:1 vernier reduction drives, turns counter. Opt. ext. 12 VDC or internal 9V batt. required..... **$549.95**

WA1FFL

Ladder-Loc® Center Insulator & Support Provides a convenient means of attaching 450Ω *ladderline* to various dipole antennas. This sturdy support minimizes feedline flexing at the antenna feedpoint and ensures a long lasting, trouble-free installation. A top attachment point is provided for attaching a center support rope. UV stabilized for long life..... **$12.95**

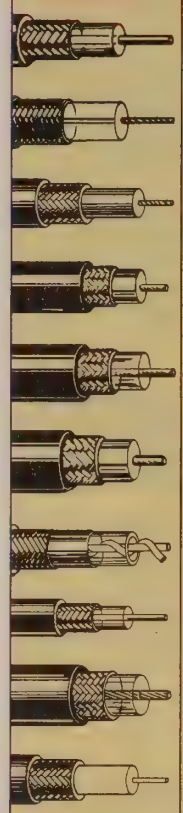
PALOMAR Engineers



PT-340 Tuner-Tuner Eliminate QRM, overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Just turn it on, and listen to the noise output in your receiver, then adjust your station tuner controls for a dip in the noise (a null). Covers 1.7 to 30MHz. Uses 9V battery. 6"w x 5"h x 3"d **$99.95**

Coaxial Cable, Rotor, Antenna & Ground Wire

Belden



Belden number	RG-type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
9201	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
8240	58/U	.193	#20 solid tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	3.8 dB
8259	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
8219	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
8262	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non-contam. PVC	50	66%	4.9 dB
9258	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
8237	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	1.9 dB
8214	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
9913	8/U	.405	#10 solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.3 dB
9913F* *High-Flex	8/U	.405	#10 stranded copper	Cellular polyethylene	100% foil + 90% braid	PVC	50	83%	1.3 dB
9251	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	52	66%	2.2 dB
8267	213/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	50	66%	2.1 dB
8241	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
8238	11/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
8213	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

See BELDEN in the Price Guide

Rotor Cable

8448 Standard duty, 8 wire. Consists of 6-#22 and 2-#18 tinned copper conductors. PVC insulation and PVC jacket. For run up to 100 ft.

9405 Heavy duty, 8 wire. Consists of 6-#18 and 2-#16 tinned copper conductors. PVC insulation and PVC jacket. For runs over 100 ft.

8484 Standard duty, 4 wire. Consists of 4-#20 tinned copper conductors. PVC insulation & jacket.

Antenna & Ground Wire

8000 #14 AWG (7x22), stranded bare copper-covered steel Antenna Wire.

8018 #8 AWG (solid), soft annealed aluminum Ground Wire – multiples of 50'

Preassembled Coaxial Hook-up Cables.

BELDEN

9349 3' RG-58AU low-loss foam w/PL-259s . **$14.95**
9350 15' RG-58AU low-loss foam w/PL-259s **$16.95**
9352 50' RG-58AU low-loss foam w/PL-259s **$24.95**
9354 50' RG-8U low-loss foam w/PL-259s.... **$46.95**
9355 75' RG-8U low-loss foam w/PL-259s.... **$64.95**
9356 100' RG-8U low-loss foam w/PL-259s.. **$79.95**

VAN GORDEN

8X-3ST 3' RG-8X w/silver-teflon PL-259s..... **$8.95**
8X-6ST 6' RG-8X w/silver-teflon PL-259s **$10.95**
8X-12ST 12' RG-8X w/silver-teflon PL-259s . **$11.95**
8X-25ST 25' RG-8X w/silver-teflon PL-259s . **$15.95**
8X-50ST 50' RG-8X w/silver-teflon PL-259s . **$24.95**
8X-75ST 75' RG-8X w/silver-teflon PL-259s . **$31.95**
8X-100ST 100' RG-8X w/silver-tef. PL-259s . **$37.95**
213-3ST 3' RG-213 w/silver-teflon PL-259s . **$11.95**
213-6ST 6' RG-213 w/silver-teflon PL-259s . **$14.95**
213-12ST 12' RG-213 w/silver-tef. PL-259s . **$18.95**
213-25ST 25' RG-213 w/silver-tef. PL-259s . **$25.95**
213-50ST 50' RG-213 w/silver-tef. PL-259s . **$38.95**
213-75ST 75' RG-213 w/silver-tef. PL-259s . **$54.95**
213-100ST 100' RG-213 w/sil.-tef. PL-259s . **$72.95**

MFJ MFJ ENTERPRISES, INC.

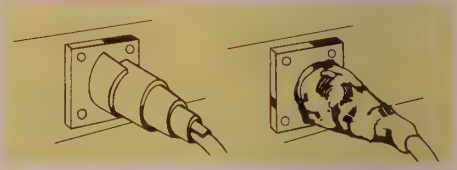
Hard Mount Coaxial Line with connectors Top quality PL-259 connector with 17' of tough RG-58A/ U coaxial line. Easily snakes around a vehicle to the best operating position. Perfect for MFJ *RuffRider™* or other high gain mobile VHF/UHF antennas.

MFJ-341S for SO-239 base connector..... **$19.95**
MFJ-341M for NMO base connector..... **$19.95**

Antenna, Coax & Connector Protection Products

COAX-SEAL The Original Connector Sealant!

Hand Moldable Plastic for Antenna Component Protection



UNV 104 The quick and effective way to seal and protect all types of coaxial fittings, baluns, antenna parts and connectors. Simply wrap it on like regular tape, then mold it to any shape. It adheres tightly to metal, vinyl and polyvinyl coax outer jackets. Stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal just by re-forming the same material. Non toxic and non-contaminating Roll, 1/2"w x 60"..... **$2.95**

PENETROX® A
Recommended for use on aluminum to aluminum and aluminum to copper connectors, on bare conductors, and on bus bars. Good for all voltages. Assures high conductivity joint by sealing out air and moisture to prevent corrosion and reformation of oxide film. Apply to mating pieces of antenna components, tubing, etc. during assembly to provide a non-corrosive, low resistance and air tight seal. Makes disassembly at a later date a breeze..... (4oz bottle) **$12.95**

CROSS DEVICE STUF Dielectric Waterproof Connector Filler - seals out moisture High purity macroscopic foam that dielectrically simulates the coaxial cable core. Fill coax connectors and tighten. The filler material hydraulically channels into all connector voids and points of moisture entry. Non-hardening, easy to removal No silicones, or other additives to harm coax cable material..... CRS STUF (tube) **$4.95**

Van Gorden Engineering

Ladder Line

450Ω 100 ft 18 ga. insulated ladder line..... **$12.95**
450Ω 100 ft 14 ga. insulated ladder line..... **$24.95**
450Ω 1000 ft 18 ga. insulated ladder line... **$99.95**
450Ω 1000 ft 14 ga. insulated ladder line **$199.95**

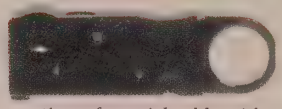
White Nylon Rope

NR-100 100 ft. roll, antenna guy rope **$4.95**
NR-1,000 1000 ft. roll, antenna guy rope..... **$44.95**

N Connector

Male connector for Belden 9913 & 8214 coax.. **$4.95**

AIM
Coaxial Cable Stripper



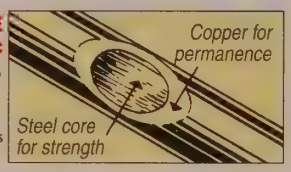
For quick, clean preparation of coaxial cable without damage for installation of connectors. Simply insert coax into tool, turn clockwise 4 or 5 times.

24-7735P for RG-58, RG-59, RG-63 ..... **$21.95**
24-7736P for RG-6, RG-59, 8281 ..... **$21.95**
24-7739P for RG-8, RG-11, RG-213 ..... **$28.95**

CASTLE RIDGE PRODUCTS, INC

COPPERWELD® Antenna Wire

FORGE-WELDED makes the two metals inseparable!



Solid bare copper-over-steel wire – the Best for antennas

Very strong, the steel core has very little stretch and long service life. The copper covering provides low RF resistance and is easy to solder. Choice of 12, 14 or 18 gauge; 100, 150, 250, 500 or 1000 ft. rolls.

AN-122	100 ft. #12	$24.95	AN-143	150 ft. #14	$24.95
AN-123	150 ft. #12	34.95	AN-144	250 ft. #14	34.95
AN-124	250 ft. #12	49.95	AN-146	500 ft. #14	59.95
AN-126	500 ft. #12	89.95	AN-148	1000 ft. #14	104.95
AN-128	1000 ft. #12	149.95	AN-181	250 ft. #18	14.95
AN-142	100 ft. #14	19.95	AN-182	500 ft. #18	24.95

synthetic textiles, inc. **BLACK DACRON® POLYESTER ANTENNA ROPE**

Constructed of strong, double braid Dacron® Black for UV protection. Resistant to mildew & abrasion. Ties & cuts easily, sealing effectively w/hot knife.
• 100 ft. 3/32" **$6.95** • 350 ft. 3/16" **$39.95**

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

DUPLEXERS

LEADS	2m/440	2m/220	440/1200	HF/6 to 440
SO239 PL259/PL259 — No	COMET CF4160K DIAMOND MX72D MFJ 916	DIAMOND MX214D		
SO239 PL259/Nmale — No	COMET CF4160I			
SO239 SO239/SO239 — No	COMET CF4160J VALOR D270			
SO239 PL259/PL259 — Yes	COMET CF416A COMET CF530 DIAMOND MX72H	COMET CF142 DIAMOND MX214		COMET CF360A **HF to 6/2m** COMET CF706 DIAMOND MX62M
SO239 PL259/Nmale — Yes	DIAMOND MX72N YAESU AD3			
N female PL259/Nmale — No	COMET CF416C COMET CF416W		COMET CF413B	
N female Nmale/Nmale — Yes			COMET CF4130A DIAMOND MX37	
N female Nmale/Nmale — Yes			COMET CF413A	
PL259 SO-239/SO239 — Yes				COMET CF360B

For duplexer/triplexer Prices see the Price List under the respective manufacturer

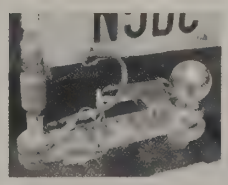
TRIPLEXERS

LEADS	HF/6/2/440/1200	6/2/440	2/220/440
N female PL259/Nmale/Nmale — No	COMET CFX4310B (also covers 900MHz range)		
N female PL259/PL259/Nmale — No	COMET CFX4310C DIAMOND MX3000D		
SO239 PL259/PL259/PL259 — Yes	DIAMOND MX2000	COMET CFX514	COMET CFX324A DIAMOND MX324
SO239 PL259/PL259/PL259 — No		COMET CFX5140 DIAMOND MX2000D	
N female PL259/PL259/Nmale — Yes	COMET CFX431B DIAMOND MX3000		
N female PL259/Nmale/Nmale — Yes	DIAMOND MX3000N		
SO239 SO239/SO239/SO239 — No		COMET CFX5140	

Cable X-PERTS, INC

9913FX Low Loss Coaxial Cable A low loss, very flexible coaxial cable with a UV resistant, non-contaminating PVC direct burial jacket. Semi-solid polyethylene dielectric, stranded #10 center conductor, double shielded (100% foil + 95% braid), .405" diameter, velocity factor: 84%. Loss (per 100ft.)/Power Rating: 0.9dB @ 50MHz/1700W, 1.6dB @ 150MHz/1000W, 2.8dB @ 150MHz/500W

9913FX per ft. **87¢** • 500 ft. roll **$299.95**



DC SALES

Tenna Hitch A heat treated, high strength alum. bracket w/insulated 3/8" x 24 mounting stud. Installs under the ball of any Class-I or II hitch. Handles the largest mobile antennas, and does not interfere w/trailer towing capability. No holes to drill. All hardware is supplied.. **$35.95**

UNADILLA

REYCO W2VS Antenna Traps

Add these traps to your dipole for multiband operation on two to six bands. *For example:* add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20, 40, 80 and 160 meters, add all five pairs – 33 combinations! Selecting traps is easy. Just list the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency. Cost/pair.

KW-80CW 80m CW.**$48.95** **KW-17** 17 meters..... **$41.95**
KW-80F 80m phone **$48.95** **KW-15** 15 meters..... **$41.95**
KW-40 40 meters .... **$42.95** **KW-12** 12 meters..... **$41.95**
KW-30 30 meters ... **$42.95** **KW-10** 10 meters..... **$41.95**
KW-20 20 meters **$41.95**

W2AU Ferrite Baluns

Smooth transition from unbalanced coaxial transmission line to balanced antennas such as dipoles, quads & yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain & reduced TVI/BCI. Replaces center insulator, DC grounded for lighting protection and has a convenient center eye hook for support. Usable from 1.8 to 40MHz, 2KW PEP.

1:1 or 4:1 ratio or 1:1 Beam Balun .... ea. **$24.95**

W2DU Non-Transformer Choke Baluns

A high efficiency, transformerless 1:1 balun. The HF model is the only one available that works on 160 meters! They all handle a VSWR up to 5:1 at the legal power limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies.

Order model **HF** for 1.8 to 30MHz, **VHF** for 30 to 250MHz or **Beam Balun** for 40 to 10M ... ea. **$26.95**

CENTAUR ELECTRONICS

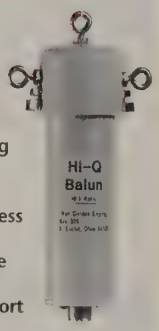
High Performance Baluns

• State-of-the Art • 0.5 to 50MHz performance with advanced toroidal transformer • 3KW SSB rated • Extended performance in hostile environments • Stainless steel hardware • Heavy-duty body materials • Military grade internal components • 3" x 7"

B11W10-50 1:1, dipole**$49.95** **B41LW10-50** 4:1, ladderline to coaxial cable **$64.95**
B11Y10-50 1:1, yagi .. **$49.95**
B41Y10-50 4:1, yagi... **$64.95**

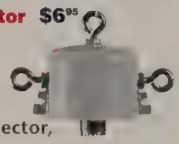
Van Gorden Engineering

Hi-Q Balun $14.95



- **1:1** or **4:1** impedance ratio for matching unbalanced coaxial cable to balanced antennas.
- For dipoles, yagis, inverted vees & doublets • Weatherproof
- Covers 3 to 40MHz, 1.5kW rating
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI & BCI problems.
- Built-in DC ground reduces noise and protects against lightning.
- SO-239 connector, center support eye hook.

Hi-Q Antenna Center Insulator $6.95



- Insulator only, *no balun*
- Replaces egg-type center insulator
- Small, rugged, lightweight, weatherproof, SO-239 connector, center supporting eye hook.

Antenna End End insulators..... pair **$4.95**
Dog Bone Antenna insulators ..... each **95¢**

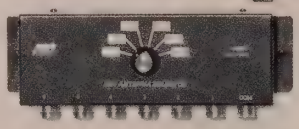
MFJ ENTERPRISES, INC. COAXIAL SWITCHES

1702C Antenna Switch Two positions plus center ground, 50 ohms. Rated to 500MHz with <0.2dB loss, 2.5KW PEP or 1 KW CW. >60dB isolation @ 300MHz or >50 dB @ 450MHz. Unused terminal automatically grounds for lightning protection **$24.95**

1702CN Lowest loss on UHF. Uses Type N connectors which are good up to 1.1 GHz **$34.95**

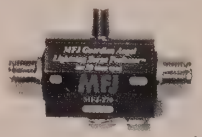
1704 Antenna Switch Four positions, plus center ground. 50Ω, rated to 500MHz with <0.2dB loss. Handles 2.5KW PEP, 1KW CW, >50dB isolation @ 500MHz. Includes a replaceable lightning protection device..... **$64.95**

1704N with Type N's **$74.95**



1701 Antenna Switch Six positions, for 50-75Ω systems. Rated for 2KW PEP or 1KW CW from 1.8–30MHz. Unused positions are grounded for lightning protection. 10"w x 3"h x 1½"d..... **$49.95**

1700B Antenna & Trans-ceiver Switch Select up to six antennas and six rigs in any combination – tuner, SWR meter, linear, etc. Can be left in line to operate w/any combination. 50 or 75Ω. Handles 2KW PEP or 1KW CW from 1.8-30MHz. Unused positions are automatically grounded for lightning protection. 10"w x 3"h x 1½"d **$79.95**



270 Lightning Surge Protector Safeguard your ham gear from damage due to dangerous static charges and lightning induced surges. Replaceable ultra-fast gas discharge tube safely shunts up to 5000 amps of peak impulse current to an independent ground. Rated to 400W PEP, usable up to 1000MHz ... **$29.95**

ANTENNA MOUNT

310 HT Antenna Window Mount Clip Your HT rubber duck antenna radiates poorly inside your car due to the shielding effect of the roof, doors, etc. Detach the duck from your HT and install on this handy BNC window mount clip. It holds your antenna securely on the outside of your car's window where it can radiate freely. It's quick and easy to install and remove. Comes with 10 ft. feet of flexible mini-coaxial cable..... **$14.95**

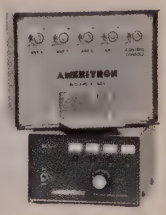
AMECO

PT-1 Preamplifier Covers 160 to 6m, useable with either a receiver or transceiver. Tunable low noise dual-gate FET circuit provides >20dB gain, low N.F. and improved spurious and image rejection. RF sensed switch with variable delay automatically bypasses to antenna on transmit. Second rcvr or ant. capability. 12V DC. or use **P-12T** AC adapter (**$9.95**) 2½"h x 8¾"w x 6¼"d **$124.95**

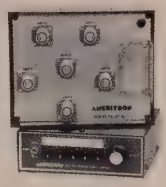
TPA Tunable Preamplifier/Active Antenna

Use as a preamplifier to improve the gain of a receiver, or as an indoor active antenna. Covers 0.22 to 30MHz in 5 bands. A dual-gate FET device provides an excellent N.F. and >20 dB gain. As a preamplifier, the input matches most antennas; long wire, 300Ω and random lengths. When no external antenna is available, the preamplifier's built-in 30" collapsible whip gives great results. Uses 9V battery or **PT-9T** AC adapter (**$9.95**). 1½"h x 8"w x 6½"d **$76.95**

AMERITRON Remote Controlled Switches

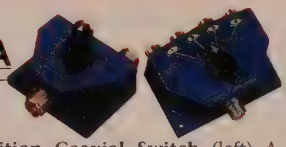


RCS-4 Select up to 4 different HF antennas while using just one coaxial feed line, and no additional control cable is required. The weatherproof switch box locates out on the tower, mast or other remote location. The control box locates at your operating position and switches antennas with a control voltage routed directly through the coaxial cable. 1.8–30MHz, 2KW **$129.95**



RCS-8V Independently or simultaneously select up to 5 different antennas using just one coaxial feedline and 8-wire control cable. Internal wiring allows user to ground or float unused terminals as required. 5KW below 30MHz, and 1KW up to 150MHz..... **$139.95**

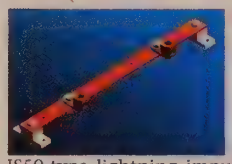
DAIWA industry co. ltd.



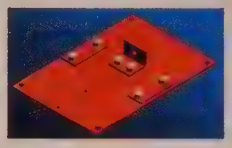
CS-201 Two Position Coaxial Switch (left) A high quality coaxial switch with excellent high frequency RF characteristics due to cavity and heavy diecast metal construction. Frequency range up to 600MHz with less than 0.12 VSWR, less than 0.2dB insertion loss & 60dB isolation between terminals. Rated at 2.5 KW PEP or 1KW CW. Auto grounding of unused terminals, SO-239 connectors **$26.95**

CS-401 4-Position Coaxial Switch (right) Same features as CS-201, but rated to 800MHz ... **$149.95**

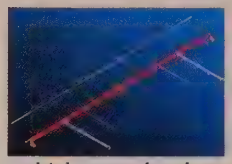
HARGER LIGHTNING PROTECTION, INC.



GBIS18114AE 1/8" **Copper Entrance Ground Bar Kit** Installs at shack entrance, making a short connection to the ground rod system. Holds up to 5 PolyPhaser IS50-type lightning impulse suppressors. Insulated stand-off brackets allow attaching & insulating of ground bar from mounting surface. Two terminal lugs & hardware included to accomodate grounding conductors, size range 1/0 stranded to #6 solid. Similar size grounding conductor should be installed from ground bar to station desk..... **$27.95**



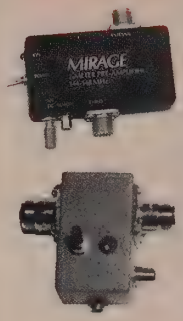
GP1868.78AE 1/8" **Copper Single Point Ground Panel Kit** Provides single-point grounding for 2 trans. lines and rotor control cable. Installs at tower base or on outside wall. Sized to fit inside a NEMA-4X style box for weather proofing. Tapped holes/hardware provided for mounting a PolyPhaser IC-RCT rotor control protector & up to 2 IS-50 series coaxial protectors. Sandwich plates (2) & hardware included for use w/copper grounding straps to connect the panel to a ground system..... **$54.95**



GBIS18148AE 1/8" **Copper Station Ground Bar Kit** Installs at back of operating desk. Allows grounding of individual components to a common point to prevent multiple ground paths and "daisy-chains." Accepts a heavy ground conductor, eg. copper strap or large dia. stranded wire, which should be routed to station ground or entrance ground bar. Includes 2 pre-assembled 12" heavy straps for transceivers or amps & 2 light duty 1/4" straps for station accessories, plus extra 1/4" strap & lugs for added assemblies as needed..... **$64.95**

MIRAGE

GaAsFET Preamps for 10, 6, 2, 1¼ m & 70 cm

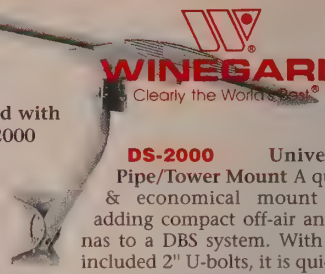


High Gain, Ultra Low Noise GaAs FET preamps improve weak reception by providing from 15–25dB of receive gain with a N.F of <0.6dB.

In-line design w/auto transmit & receive switching for up to 160W throughput. Choose in-shack model (**KP-1**), or mast mount model (**KP-2**) providing added benefit of reducing feedline loss.

10 different models – See Mirage in the Price Guide

WINEGARD® Clearly the World's Best®



pictured with GS-2000

DS-2000 Universal Pipe/Tower Mount A quick & economical mount for adding compact off-air antennas to a DBS system. With the included 2" U-bolts, it is quickly adaptable to many different pole installations. Without the U-bolts, the mount can be used for attic installations. The 22" pipe has an E-coat finish for maximum weather protection..... **$16.95**

TV-2900 Weatherproof Transformer 82 channel, matching transformer for indoor or outdoor use. Adapts 75Ω coaxial cable with F-connector to terminals of a 300Ω TV antenna, TV set or coupler. Includes F-connector and boot **$2.95**

LB-2000 Dual Feed LNBF Dual feed LNBF for digital satellite use in the continental United States. Allow multiple receiver use **$75.95**

RG-6 75Ω Coaxial Cable with cellular poly dielectric, #20 copperweld center conductor, 100% aluminum foil shield and 40% aluminum braid shield provides low-loss, good conductivity, flexibility & tensile strength. Weatherproof F-connectors installed.

CX-0625 25 ft. length **$10.95**
CX-0650 50 ft. length **$15.95**
CX-0675 75 ft. length **$19.95**
CX-6100 100 ft. length **$24.95**

Once again

THE ASSOCIATES®

AES is bringing you instant approval on a revolving credit basis.

Call us now for details.

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Browse Our Store On-Line at www.aesham.com

PolyPhaser Corporation's coaxial impulse suppressors are a unique line of patented products. Hermetically-sealed voltage sensitive gas tubes are used with additional components to assure that surge voltages and currents formed differentially on the coax are not conducted to the equipment input. There is no dc continuity from center pin to center pin on our dc blocked protectors.

Other gas tube protectors have dc continuity through their center pins and share the energy with the equipment before the gas tube turns on. *Quarter wave stub protectors* are also dc coupled devices. There is dc continutiy between their center pins and the equipment input.

A PolyPhaser dc blocked protector only lets through our rated specification (low milli-, or microjoules). Peak voltage let-through is also significantly less than dc continuity protectors. PolyPhaser's measured let-through energy and voltage is the industry's lowest.

- Multi-strike capability with low-strike throughput energy
- Aluminum enclosure
- VSWR: ≤1.1 over its frequency range

FLANGE MOUNT

IS-50UX-C0 Frequency Range: 1.5MHz to 400MHz; Max. Power: HF 2kW, VHF 375W, UHF 125W

IS-50UX-C1 Frequency Range: 50MHz to 700MHz; Max. Power: VHF 375W, UHF 125W

IS-50NX-C2 Frequency Range: 125MHz to 1000MHz; Max. Power: VHF 375W, UHF (low) 125W, 800MHz to 1GHz 50W. Type N connectors

BULKHEAD MOUNT

IS-B50LU-C0 Frequency Range: 1.5MHz to 400MHz; Max. Power HF 2kW, VHF 375W, UHF 125W

IS-B50LU-C1 Frequency Range: 50MHz to 700MHz; Max. Power VHF 375W, UHF 125W

IS-B50LN-C2 Frequency Range: 125MHz to 1000MHz; Max. Power VHF 375W, UHF (low) 125W, 800MHz to 1GHz 50W. Type N connectors

ROTOR CONTROL PROTECTOR

IS-RCT Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated faster than other gas tubes with mounting stud. 7.5"h x 3.25"w x 2.5"d.

IN-LINE PHONE LINE PROTECTOR

IS-SPTL Multi-stage protection, with large bandwidth and fast response time. EMP rated. For telephone trunk lines — handles standard ring voltages to 105Vrms. Handles surges up to 36kA.

POWER LINE EXTENSION PROTECTOR

In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering, and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, circuit breaker for added protection. All aluminum-grounded enclosure. 4.25" wide.

IS-PLDO-120-15A 15' cord, 120V @ 15A

IS-PLDO-120-20A 6' cord, 120V @ 20A

GROUNDING PANEL

CU-SPGP A .062" thick copper plate mounted on a painted 1/2" plywood backing. Mounting protectors & a single ground point established for station equipment. Comes with concrete anchors, all mounting screws, 10' of 1.5" copper grounding strap, 2 brass sandwich plates, and joint compound. 18"w x 12"h; 16"d center mount.

LOW INDUCTANCE COPPER STRAP

Copper strap has an advantage over wire when used for grounds, as it has lower inductance, and cannot be fused open by lightning. For example: 1.25" strap has a lower inductance than #2.0 stranded wire. It's easy to cut, solder, etc. Usable above or in-ground applications. 26 AWG thickness (0.0159"). Available in 1.5, 3 & 6 inch widths, and 25, 50, 75 or 100 foot rolls.

ALPHA DELTA COMMUNICATIONS, INC. (AA)

OUTbacker 2

HF Mobile/Base Antennas

HAM • MARS • CAP • MARINE/ITU
WIDE BANDWIDTH • LOW VSWR
NO COILS – JUST CHANGE THE TAP!

The Outbacker™ – Constructed of fiberglass with pre-tuned copper helical windings and covered with smooth epoxy-resin and a coating of polyurethane for strength, and durability. The mounting ferrule is nickel-plated brass with standard 3/8x24 threads.

Frequency coverage is broadbanded but the top spike is adjustable which allows tuning for the lowest possible VSWR on 75M and the upper end of 10M.

Tap points are clearly engraved for each band. Changing bands is accomplished manually by plugging the unique OUTBACKER "Wander lead" into the proper tap; for 75M the lead is removed entirely.

Beautiful, shiny black finish. 8 models, with optional spring/base, mounts and cable.

	Description	AES Model #	Price
OUTBACKER PERTH	75-10M + WARCs, 150W P.E.P • 7.5 ft. tall • 3.5 ft. stinger retracts into the 4 ft. mast for garaging	Perth	$289.95
OUTBACKER PERTH PLUS	75-10M + 6 & 2M • 6 ft. tall • Perfect for HF + VHF radios: IC-706 Series, DX-70T Series, FT-100, etc.	Perth Plus	$299.95
OUTBACKER 8	75-10M, 300W P.E.P • 6 ft. tall	OB-8	$279.95
OUTBACKER HP	75-10M • HIGH POWER – 500W P.E.P rating • 6 ft. tall	OB-8HP	$299.95
OUTBACKER SPLIT	75-10M, 300 W P.E.P • 6 ft. tall • Breaks down into two 3 ft. sections, comes with carrying pouch	OB-S8	$299.95
OUTBACKER TRI-SPLIT	Same as OUTBACKER SPLIT except breaks down into three 2 ft. sections, storage pouch included	OB-8TRI	$329.95
OUTBACKER MARINER	Covers ITU Marine: 2.182, 4.1, 6.2, 8.2, 12.4, 16.5, & 22.1MHz and Ham bands: 75, 40, 20,17 &10M	OB-M	$429.95
OUTBACKER STEALTH PLUS	75-10M + 6 & 2M • 4 ft. tall, 150W PEP • Perfect for use w/HF + VHF radios: IC-706, DX-70T, FT-100	Stealth PLUS	$269.95
OUTBACKER Spring/Base	HEAVY DUTY • Nickel/zinc plated • 3/8-24 threads • SO-239 connector • Requires 1/2" mtg. hole	OB-SB	$99.95
OUTBACKER OB-360	Trunk lip mount with spring for Perth/Stealth Plus/Perth Plus	OB-360	$99.95
DIAMOND K-4003/8C	Diamond 3/8" x 24 thread trunk-lip mount with 6 ft. coaxial cable for all OUTBACKER models	DIA K400-3/8C	$69.95
DIAMOND C-110	Diamond 10 ft. extension cable for K-400-3/8C trunk-lip mount	DIA C-110	$14.95

OUTbacker 2

The Outreach™ ...$399.95

A complete *efficient* portable antenna system to meet the needs of those who have limited space or are deed restricted. Ideal for backyard, patio, woods or field day. Covers all bands from 160 thru 10 meters, providing an exceptional level of performance. The perfect companion for the Outpost Tripod mount. Black, heavy duty epoxy finish looks great! Slim design makes it nearly invisible to your neighbors.

- Covers All Bands, 160–10 meters • Overall Length: 12 ft. • Weight: 4 lbs.
- Exceptional performance! 10, 12, and 15 meters are 5/8 wave – all bands are center loaded for peak performance. • Rated at 300W PEP.
- Utilizes the time proven OUTBACKER® band tap system.
- Split 8 ft. shaft and 4 ft. stinger • Breaks down into (2) 4 ft. sections for portability; comes with a protective carrying case.
- Terminates into a standard 3/8" x 24 threaded base.

The Outreach 500™ ...$439.95

The mechanical specifications are exactly the same as for the standard Outreach model, however it does not cover 160 meters, but includes 6 meters in addition to all other HF bands including the WARC bands. A band tap is provided for both 80 & 75 meters, allowing coverage of the entire 3.5 to 4.0 MHz range. Power handling capability has been increased to a robust 500W CW and 600W PEP SSB.

The Outrunner™ ...$349.95

It's like the standard Outreach model, except its length is 9 ft. instead of 12 ft. It covers 160 thru 10 meters including WARC bands, but lower rated at 150 Watts PEP. It also has has a two-piece split shaft, and a 3 ft. stinger, and terminates into a standard 3/8" x 24 treaded base.

www.alphadeltacom.com

Variable Response Console

An advanced audio processing speaker system that offers studio level audio quality for music, voice, and CW/data for the Ham operator. It enhances the reception capabilities of ANY receiver, transceiver or scanner—even those using DSP! It features an exclusive custom designed ducted port bass reflex speaker system that offers outstanding audio performance.

- Low distortion, low harmonic push-pull audio amplifier. Outperforms the typical single-ended amplifier.
- Adjustable 12dB Bass boost and cut circuitry enhances both Voice and Music. LED reads out in dB
- Adjustable sharp cut-off "Sampled Data Switched Capacitor Audio Filter" (SCAF) can be set for optimum interference reduction for any mode and any band condition – AM, FM, SSB, CW or data. An LED light bar readout shows the cut-off frequency.
- Peaking circuitry (20 dB) allows CW and Data signals to "pop" out of the background noise & interference.
- Continuously adjustable 40dB Deep Notch circuitry effectively takes out interfering heterodynes.

Model VRC Variable Response Console $249.95

Model VRC-2 Ducted Port Bass Reflex Speaker same as above, but no amplifier/filter ... $99.95

KENT Paddles by ALPHA DELTA

Titanic Key

Reasons for Buying KENT Paddles:

- Delicate, smooth feel due to sealed ball bearings instead of simple spring-loaded pivots • Free movement, minimum friction sideplay
- Precise gap alignments with instrument knurled heads on fine pitched screws and locking nuts.
- Rugged components made from machined, polished solid brass contained within a permanent brass housing.
- Silver contacts • Non-slip feet • Weighted for stability • Paddle models use heavy steel bases
- Designed and produced by *R.A. Kent Engineers, England.* Imported, fully assembled and tested by *Alpha Delta.*

Model SK-1 Straight Morse Key (top) $129.95
Model SP-1 Single Paddle Morse Key (bottom/left)...$139.95
Model TP-1 Twin Paddle Morse Key (bottom/right)....$149.95

TK-1 Titanic Morse Code Key ... $149.95

Robert Kent of Kent Engineers in England did meticulous research on the code key that was used on the Titanic, and has produced a beautiful crafted machined brass, working replica to be marketed by Alpha Delta. Each key has a serial number, a matching certificate telling of the event, and are individually signed by Kent for authenticity. The key provides extremely smooth operation and is a great addition to any station or collector's desk.

ALPHA DELTA COMMUNICATIONS, INC.

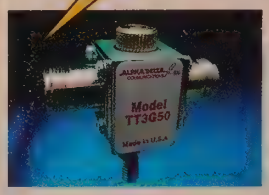
Outpost™ Tripod/Ground Coupler Mounting System ... $199.95

- The fold-out legs and blades act as a large capacitor to improve ground coupling for a better impedance match and antenna efficiency
- Matches the base impedance of all **OUTBACKER®** antennas.
- Compact, fold-up design sets up quickly. Stands alone, no digging, no holes, no concrete. Collapse it, throw it in the trunk, take it with you!
- Fold-over top bracket. Mobile-type mount with SO-239 connector accepts a standard 3/8" x 24 stud. Antenna is easily removed or folded down for changing bands, or to be out of view when not in use.
- Constructed of aircraft 6061-T6 aluminum, stainless steel hardware and wing nuts. All assembled, no tools required. • Weigh: 18 lbs

DH-1 Hydraulically Dampened Fold-Over Fixture ...$249.95

- Allows easy installation or working on your vertical antenna from the ground without a ladder or the inconvenience of taking it up and down.
- Quick and easy raising and lowering. Great for the larger HF Verticals such as the R-6000, R-7000, DX-77, Patriot or others up to 29 ft. long.
- Hydraulic module provides assisted lowering for safe, one man operation.
- Stealth, unobtrusive! When lowered, the attached antenna rests steady in a horizontal position hidden from your neighbor's view.
- Bolts temporarily to a weighted board, or to a 16" square x 24" deep concrete base. • Stainless steel hardware, no assembly required. • Weight: 33 lbs.

Innovative Products for the Radio Amateur



Low Loss, Broadband, Coax Surge Protectors

UL listed – provides greater protection for your ham gear from lightning and static charges much more effectively than the lower cost air-gap types.

The heart of this unit is the Arc-Plug™, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. Acting like a voltage dependent switch, it can repeatedly carry large currents for brief periods of time. When an excessive voltage surge occurs on your feedline line, an arc forms between the electrodes conducting it harmlessly to ground, reducing feedline voltage to a safe value.

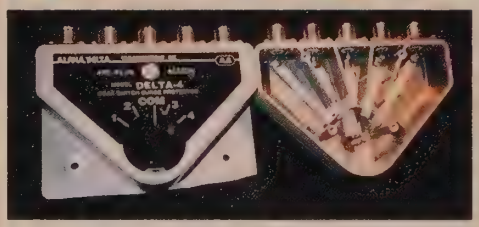
After repeated zaps (over a period of years) the Arc-Plug™ may need replacing. You know it's time when your receive is down or the VSWR on your feedline has increased.

- **Frequency Range:** DC thru 3 GHz. Better than narrow band DC blocked or stub designs. **Typical Insertion Loss:** 0.1dB @ 1 GHz; 0.2dB @ 2 GHz; and only 0.5dB @ 3GHz.
- The impedance compensated thru-line cavity design allows control voltages to pass thru the device, instead of the "wire around" requirement of DC blocked designs; allows "in-circuit" cable sweeps.
- Knurled knob allows the Arc-Plug™ to be removed and replaced in the field without tools, and without removing the protector from the circuit.
- "O" ring sealed for complete weather proofing

ATT-3G50 N Females, 3.0GHz (200W) **$59.95**
ATT-3G50U UHF Females, 500MHz (200W) ... **$49.95**

2KW versions of both models available at no extra cost; Add **HP** suffix to the appropriate model number.

Lightning Surge Protected 2 & 4 Position Coax Switches



Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no doubt as to which position is selected. The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable Alpha Delta Arc-Plug™ cartridge provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal power.

DELTA-2 2-position coaxial switch with SO-239 connectors, rated for up to 500MHz **$49.95**
DELTA-2/N 2-position coaxial switch with N-type connectors, rated for up to 1.3GHz..... **$64.95**
DELTA-4 4-position coaxial switch with SO-239 connectors, rated for up to 500MHz **$79.95**
DELTA-4/N 4-position coaxial switch with N-type connectors, rated for up to 1.3GHz..... **$89.95**

Limited Space High Performance Antennas

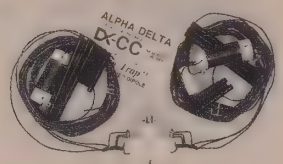
Unlike the usual trap antenna, there are no capacitors to break down under high RF voltages."ISO-RES" inductors and #12 insulated solid copper wire tolerate full-legal power. Uses direct 50Ω coax feed; tuner usually not required when operating in resonant bands, but recommended for multi-band operation.

- **NO-TRAP DESIGN**
- **STAINLESS STEEL HARDWARE**
- **ASSEMBLED**
- **SEVERE WEATHER RATED**

DX-A **160-80-40 Meter 1/4-wave Twin Sloper** A top low frequency DX antenna. Combines the DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67 ft., the other 55 ft. Installs like an Inverted-V with ground return accomplished thru tower or down-lead **$59.95**

DX-B **1/4-wave DX sloper** Single wire, high performance on 160, 80, 40 and 30M in limited space. Requires only 60 ft. overall to provide amazing DX performance at heights of only 35 ft., and with the low end at only 8 ft. above the ground. Stainless-steel hardware, #12 solid copper wire and efficient Alpha Delta *"Iso-Res"* RF choke coils. For broadbanded performance like the DX-A, the DX-B is can be be used with an antenna tuner. Has a 50Ω coax feed, rated for full legal power. Pre-assembled, pre-tuned..... **$69.95**

DX-SWL **SWL Broadcast Sloper** Covers the 13, 16, 19, 21, 25, 31, 41, 49, 60, 90, and 120M short-wave bands plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft..... **$79.95**



ALL Dipoles use the DELTA-C Hardware Kit

DX-CC **"No-Trap" 80-40-20-15-10 meter dipole or inverted-V** Overall length – 82 ft **$119.95**

DX-DD **"No-Trap" 80 &40 meter dipole or inverted-V** Overall length – 82 ft **$89.95**

DX-EE **"No-Trap" 40-20-15-10 meter dipole or inverted V** Also covers 30, 17 & 12 meters using an antenna tuner. Overall length – 40 ft **$99.95**

DX-Series Monoband Dipoles

These full-size dipoles utilize the Delta-C Center Insulator with built-in Arc-Plug® Surge Suppressor. Fully assembled using #12 insulated high-strength solid copper wire, CIN end insulators and 50 ft. nylon of support rope. Use with coaxial cable or open-line, rated for legal power.

DX-80 For 3.5 MHz (75-80M) – 133 ft. long **$49.95**
DX-40 For 7 MHz (40M), – 66 ft. long **$39.95**
DX-20 For 14 MHz (20M) – 33ft. long **$39.95**

DX-LB **Low Band Dipole** Covers 160-80-40 meters with an overall length of only 100 ft. Antenna performance and 2:1 VSWR bandwidth is site dependent and varies with height above ground and surrounding objects. The typical bandwidth is:

160M – 20kHz • 80M – 40 kHz • 40M – 300 kHz

Full band coverage can be accomplished with an antenna tuner. Built with insulated #12 wire, stainless steel hardware and uses the Model DELTA-C static protected center insulator and CIN end insulators. Use coax or open wire line and configure as a dipole or inverted-V. Assembled and ready to go!..... **$119.95**

DX-LB PLUS **Low Band Dipole** Covers 160-80-40-20-15-10M – overall length 100 ft..... **$149.95**

DX-ULTRA **Shortwave Dipole Antenna** Covers AM Broadcast through 30MHz. Provides efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial and Utility frequencies. *ISO-RES* inductors, parallel wire elements and the exclusive DELTA-C Center Insulator with the built-in ARC-PLUG® Static Electricity Protector. Over all length is 80 ft.; may be installed as a dipole, inverted-vee, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connectors will accept either coaxial cable or balanced line. Fully assembled, ready to go! **$119.95**

Antenna Hardware Kit

Don't assemble your next dipole antenna without one of these CENTER and END insulator combos.

Designed for strength, and to provide equipment protection with a built-in replaceable SEP Arc-Plug® Static Electricity Protector. Ideal for dipoles, Vees, zepps and all kinds of SWL receive antennas. Feeds with either coax or balanced line. Rated for full legal power.

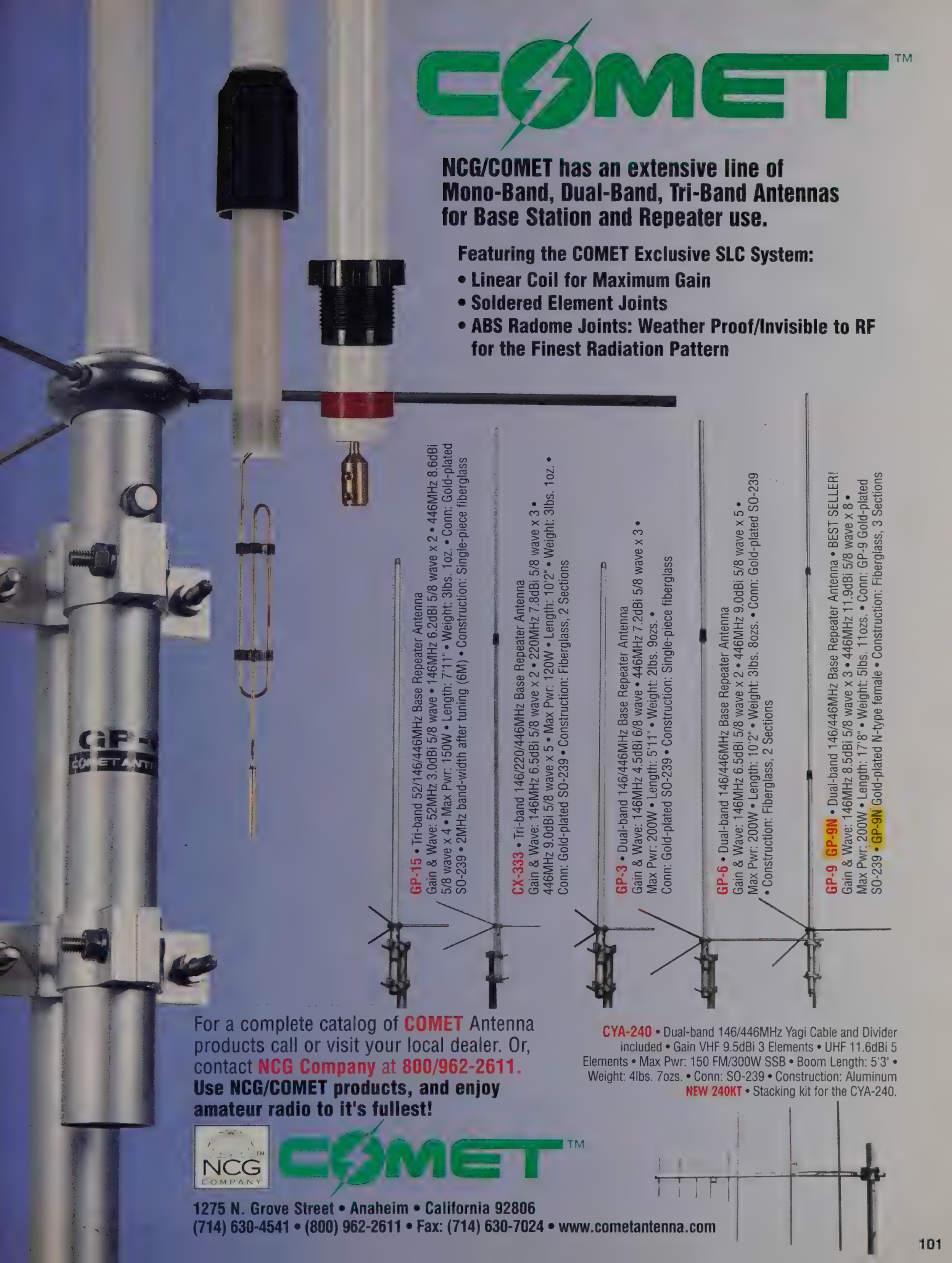
Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to 1,000's of volts; so potent, they can puncture the dielectric of unterminated coax.

The SEP Arc-Plug protector mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges routing them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges.

Both the **DELTA-C** Center Insulator and **DELTA-CIN** End-Insulators are made from an extremely rugged UV and RF resistant DELTALLOY material so tough that it can survive a drop off a roof without damage. Stainless steel hardware used in the center insulator for use in salt air and other corrosive environments, and all internal connections are hard soldered.

DELTA-C **Antenna hardware kit** Contains DELTA-C Center insulator, (2) end-insulators and a SEP ARC-PLUG Protector..... **$29.95**

DELTA-CIN **End-insulators** (separate) ..... ea. **$1.95**


COMET™
NCG/COMET has an extensive line of Mono-Band, Dual-Band, Tri-Band Antennas for Base Station and Repeater use.
Featuring the COMET Exclusive SLC System:
• Linear Coil for Maximum Gain
• Soldered Element Joints
• ABS Radome Joints: Weather Proof/Invisible to RF for the Finest Radiation Pattern
GP-15 • Tri-band 52/146/446MHz Base Repeater Antenna Gain & Wave: 52MHz 3.0dBi 5/8 wave • 146MHz 6.2dBi 5/8 wave x 2 • 446MHz 8.6dBi 5/8 wave x 4 • Max Pwr: 150W • Length: 7'11" • Weight: 3lbs. 1oz. • Conn: Gold-plated SO-239 • 2MHz band-width after tuning (6M) • Construction: Single-piece fiberglass
CX-333 • Tri-band 146/220/446MHz Base Repeater Antenna Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 220MHz 7.8dBi 5/8 wave x 3 • 446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 120W • Length: 10'2" • Weight: 3lbs. 1oz. • Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections
GP-3 • Dual-band 146/446MHz Base Repeater Antenna Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Max Pwr: 200W • Length: 5'11" • Weight: 2lbs. 9ozs. • Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass
GP-6 • Dual-band 146/446MHz Base Repeater Antenna Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 200W • Length: 10'2" • Weight: 3lbs. 8ozs. • Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections
GP-9 GP-9N • Dual-band 146/446MHz Base Repeater Antenna • BEST SELLER! Gain & Wave: 146MHz 8.5dBi 5/8 wave x 3 • 446MHz 11.9dBi 5/8 wave x 8 • Max Pwr: 200W • Length: 17'8" • Weight: 5lbs. 11ozs. • Conn: GP-9 Gold-plated SO-239 • GP-9N Gold-plated N-type female • Construction: Fiberglass, 3 Sections
For a complete catalog of COMET Antenna products call or visit your local dealer. Or, contact NCG Company at 800/962-2611.
Use NCG/COMET products, and enjoy amateur radio to it's fullest!
CYA-240 • Dual-band 146/446MHz Yagi Cable and Divider included • Gain VHF 9.5dBi 3 Elements • UHF 11.6dBi 5 Elements • Max Pwr: 150 FM/300W SSB • Boom Length: 5'3" • Weight: 4lbs. 7ozs. • Conn: SO-239 • Construction: Aluminum
NEW 240KT • Stacking kit for the CYA-240.
NCG COMPANY
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1275 N. Grove Street • Anaheim • California 92806
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Go Mobile, get there with → COMET!

Build your own antenna mounting system with the lip mounts and cable assemblies below.

Choose a Lip Mount

RS-730
Multi-adjustable heavy duty lip mount, up to 70"

RS-720 • RS-720 NMO
Multi-adjustable lip mount, up to 60" antenna RS-720 NMO accepts an NMO mount

RS-520
Multi-adjustable lip mount, up to 45" antenna

Choose a Cable Assembly

length

3D5M Standard low loss cable assembly. Gold plated SO-239/ PL-259 connectors. 17' length

3D4M Same as 3D5M, but 13.5'

antenna

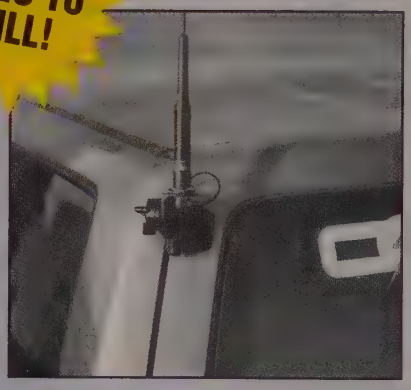
CK-3M5 Deluxe cable assembly 17' length including 17" of RG-188A/U for easy entry from a lip mount without causing water leak, wind noise or coax damage

CK-3M Deluxe cable assembly same as CK-3M5, but 9'9" total

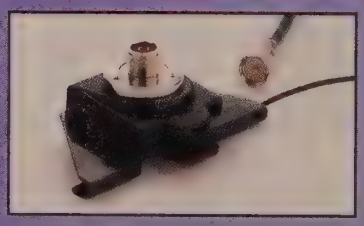
Create an antenna mounting system just for your vehi-

Attach the chosen mount to the trunk, door, hood, hatch or rear door of your car, van or SUV. Any lip 1/4" or less in thickness will do. Tighten the setscrews and adjust the mount to vertical. **Installation takes only a few minutes.**

NO HOLES TO DRILL!



Additional available mounting assemblies with cable included!



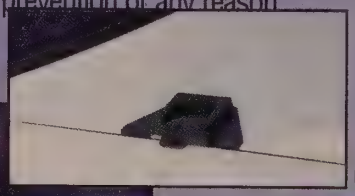
length

CQ-5M
Deluxe "Quick-Disconnect" trunk lip mount with CK-3M5 cable included. With a flip of a lever, the antenna and coax are easily removed and stored in the trunk for car washes, theft prevention or any reason

GR-5M
Deluxe stainless steel trunk lip mount with CK-3M5 deluxe cable included. Fully adjustable.

A

B



C

COMET™

NCG COMPANY

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Fax: (714) 630-7024 • www.cometantenna.com

Go Mobile, get there with COMET!

*NEW MH-209SMA • Dual-band 146/446MHz HT Antenna w/SMA Conn
Gain & Wave: 0 1/4 wave • Length: 3" Flexible rubber • Conn: Male SMA • Max Pwr: 5W

NEW SMA-503 • Dual-band 146/446MHz HT Antenna w/SMA Conn
Length: 8.75" • Conn: Male SMA • Max Pwr: 10W

*NEW MH-510 • Tri-band 52/146/446MHz HT Antenna w/SMA Conn
Gain: 0/0/ 3.2dBi • Length: 20.75" • Conn: Male SMA • Max Pwr: 10W

SB-15 • Tri-band 52/146/446MHz w/fold-over
Gain & Wave: 52MHz 0dBi 1/4 wave • 146MHz 4.5 dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

SBB-7 SBB-7NMO • Dual-band 146/446MHz w/fold-over NEW BLACK COLOR
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SBB-7 PL-259/SBB-7NMO NMO • Max Pwr: 70W

SBB-5 SBB-5NMO • Dual-band 146/446MHz w/fold-over NEW BLACK COLOR
Gain & Wave: 146MHz 2.5dBi1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: SBB-5 PL-259/SBB-5NMO NMO • Max Pwr: 120W

THEFT Z750 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: Gold-plated PL-259 • Max Pwr: 200W

THEFT Z780 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
146MHz 6/8 wave 4.5dBi • 446MHz 5/8 wave x 3 7.2dBi • Length: 62" • Conn: Gold-plated PL-259 • Max Pwr: 150W

B-20 B-20NMO • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.0dBi 5/8 wave x 2 • Length: 30" •
Conn: B-20 PL-259/B-20NMO NMO • Max Pwr: 50W

B-10 B-10NMO • Dual-band 146/446MHz cellular look-a-like •
Gain & Wave: 146MHz 0dBi 1/4 wave • 446MHz 2.15dBi 1/2 wave • Length: 12" •
Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

- The CA-UHV is a 6M/2M/70cm triband antenna. Add 2-3 of the stock or optional coils for 5-6 band operation.
- HF-70cm all in one economical easy to mount antenna.
- Fold-over hinge built in.
- Select the correct duplexer or triplexer for your specific radio (s).
- CF-706A, CF-530, CFX-514N (Ask your dealer)

NEW CA-UHV • HF/6M/2M/70cm Mobile Antenna40/^20/^17/15/10/6/2M/70cm 40M Thru 70cm!
Gain & Wave: HF-6M 1/4 wave • 2M 3.4dBi 5/8 wave • 70cm 2.15dBi 1/2 wave • VSWR: HF 1.6:1 or less • 6M-70cm 1.5:1 or less • Length: 6'2"
• Max Pwr: HF 120W SSB • 6M 200W SSB/100W FM • 2M/70cm 100W FM • *L-14 Optional 20M coil • *L-18 Optional 17M coil

*NEW MSG-1000C • Dual-band 146/446MHz w/spring whip and fold-over
Gain & Wave: 146MHz 2.15dBi1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: PL-259 • Max Pwr: 120W

*NEW MSG-1100C • Dual-band 146/446MHz w/spring whip and fold-over
Gain & Wave: 146MHz 3.5dBi1/2 wave • 446MHz 6.0dBi 5/8 wave x 2 • Length: 43" • Conn: PL-259 • Max Pwr: 150W

NEW MSG SERIES*

Performance and Durability! Designed with a spring in the whip to absorb impacts.

For a complete catalog of NCG/COMET Antenna products call or visit your local dealer. Or contact NCG Company at 800/962-2611. Use NCG/COMET products, and enjoy amateur radio to it's fullest!

*NCG Product

1275 N. Grove Street • Anaheim • California 92806
(714) 630-4541 • (800) 962-2611
Fax: (714) 630-7024 • www.cometantenna.com

B&W

BARKER & WILLIAMSON ANTENNAS and ACCESSORIES

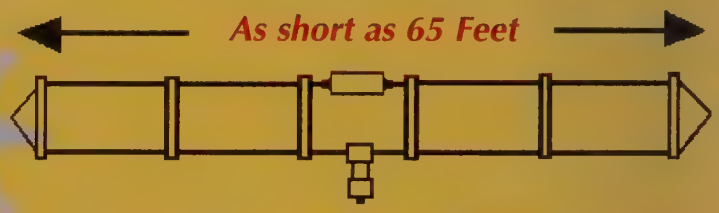
603 Cidco Rd • Cocoa FL 32926 Tel: 407-639-1510 • Fax: 407-639-2545

For more information, please visit our website at www.bwantennas.com

Broadband Folded Dipoles - Continuous Coverage of HF Band

These antennas are so unique that they even have a patent on them! They can offer operation over the entire HF band without need for an antenna tuner. Work *any* frequency you want without going through a lot of knob twirling and measurements to get a good SWR match - *just set your frequency and go!*

See B&W in the Price Guide



This antenna was designed at Barker & Williamson by request of the US Government over 20 years ago. Since then we have supplied tens of thousands of them to the US Armed Forces and other military organizations including NATO, international disaster relief organizations, emergency management operations and countless commercial organizations around the world. They can be found on every continent, including Antarctica. From deserts, to tropical rain forests, to frozen tundra - tough antennas that deserve their excellent reputation for performance worldwide.

✓Unique Patented Design
✓True Continuous Coverage
✓1.8 - 30 Mhz in Only 90 Ft.
✓Low Noise for Superior Receive

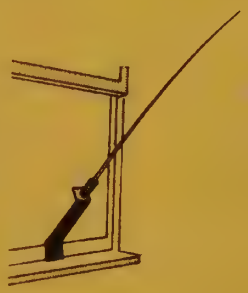
- SWR less than 2:1 from 1.8 - 30 Mhz
- No antenna tuner required
- 2 KW PEP SSB/CW ICAS
- #14 stranded copperweld or stainless wire
- 50 Ohm input with SO-239
- Comes completely assembled, only 10 lbs.
- Install as flat, inverted Vee, or sloper

AC-5-30 (Copperweld), ACS-5-30 (Stainless Steel) ----------5.0 to 30 MHz in 65 feet
BWD-1.8-30 (Copperweld), BWDS-1.8-30 (Stainless Steel) -----1.8 to 30 MHz in 90 feet
ASW-90 (Copperweld) ***Receive Only*** **----------500 kHz to 30 MHz in 90 feet**

Trap Dipole Antenna Kits

Barker & Williamson dipoles are made from #14 stranded copperweld wire. All antennas will handle 1KW PEP. These dipoles may be installed as inverted "Vees" or horizontally.

Length	Bands	Description	Model	Shpg Weight
137 Ft 41.75 M	160 80 40 20	Low SWR on all bands. Three sets of traps isolate a full half wave on each band for superior performance.	AS-160	8 lbs 3.65 Kg
110 Ft 33.5 M	80 40 20 15 10	Low SWR on 80 and 40 meter bands, somewhat higher SWR on 20, 15 and 10 meters. Utilizes one set of traps.	AT-110	5 lbs 2.25 Kg
96 Ft 29.25 M	160 30	2 KW PEP. This antenna has one set of loading coils to allow 160 meters in very limited space.	AXS-160	6 lbs 2.72 Kg
78 Ft 23.75 M	80 40 20	Two sets of traps give low SWR on all bands. Excellent 80 meter coverage.	AS-80	6 lbs 2.72 Kg
65 Ft 19.8 M	80 40 15	A combination of one set of loading coils and one set of traps allows 80 meters in very limited space.	AXS-80	6 lbs 2.72 Kg
55 Ft 16.75 M	40 20 15 10	Four bands in only 55 ft. One set of traps gives efficient operation.	AT-55	5 lbs 2.25 Kg
40 Ft 12.2 M	40 20 15 10	Utilizing three sets of traps, this antenna has low SWR on all bands.	AS-40	7 lbs 3.18 Kg
20 Ft 6.1 M	20 15 10	For very tight spots, two sets of traps yield low SWR on all three bands.	AS-20	6 lbs 2.72 Kg

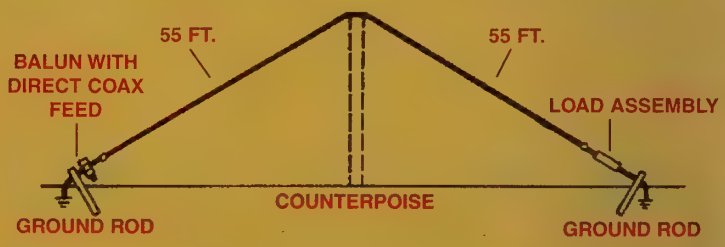


300W PORTABLE ANTENNA 2 TO 40 METERS

AP-10 Designed especially for renters, travelers and city dwellers. Aluminum bracket clamps to a window or table. Includes detachable whip (51"), insulated counterpoise wire, 10 ft. of coax, hardware and set of 5 loading coils for 40, 30, 20, 15 and 10 meters. Use nearest coil and adjust counterpoise for in between bands. No coils needed for 6 or 2 meters. Also useful as an emergency antenna. Don't be off the air! Requires simple assembly. 3 lbs.

End-Fed Vee - Broadband from 1.8 to 30MHz

All of the same unique broadband characteristics of our folded dipole antennas, except in a different configuration. Weight 7 lbs.



AC-1.8-30 ----------Copperweld Wire
ACS-1.8-30 ----------Stainless Steel Wire

CUSHCRAFT
COMMUNICATIONS ANTENNAS

The R7000 is a 10 through 40 meter, no ground radial antenna that is expandable to include 80 meters. It includes the best features of its predecessor the R7 plus many more. R7000 means excellent performance, easy installation and use, slim silhouette and high reliability.

R80 Add-On Kit

80 meters can be easily added to the R7000 with the R80 kit. The kit includes a 40 meter trap, tubing, 80 meter loading coil, UV stable 400 lb. test guy rope and three 20 foot counterpoise wires that attach to your guy points. The R80 counterpoise wires were designed with state-of-the-art anti-resonators to ensure top performance on all bands. The R7000+ with R80 kit is pictured on the next page.

- **EXPANDABLE TO 80M**
  Transform your R7000 into an R7000+ with R80 kit (trap, tubing, guy & counterpoise wire)
- **RUGGED**
  New trap design uses low-loss Teflon® dielectric
- **EASY INSTALLATION**
  For typical use, tuning is not needed
- **AUTOMATIC BAND CHANGING**
  To any band from 10 through 40m (80m with R80 kit)
- **SLIM SILHOUETTE**
  Gain favor of family and neighbors with the slim, smooth profile of our new trap design

MODEL	R7000	R7000+ (w/R80 kit)
Frequency, meters	10,12,15,17, 20,30,40	10,12,15,17 20,30,40,80
Gain, dBi	3	3
VSWR	1.2:1 typical	1.2:1 typical
2:1 bandwidth, KHz	10m (1700) 12m (100) 15m (450) 17m (100) 20m (250) 30m (100) 40m (150)	10m (1700) 12m (100) 15m (450) 17m (100) 20m (250) 30m (100) 40m (100) 80m (70)
Power Rating, Watts PEP	1500	1000
Radiation angle, deg.	16	16
Horizontal rad, deg	360	360
Height, ft(m)	24 (7.3)	34.5 (10.5)
Mast size range, in (cm)	1-3/4 to 2-1/8 (4.4-5.4)	1-3/4 to 2-1/8 (4.4-5.4)
Wind load, ft2 (m2)	2 (0.2)	2.5 (.23) antenna 1.5 (.139) guys
Weight, lb, (kg)	18 (8.2)	24 (10.8)

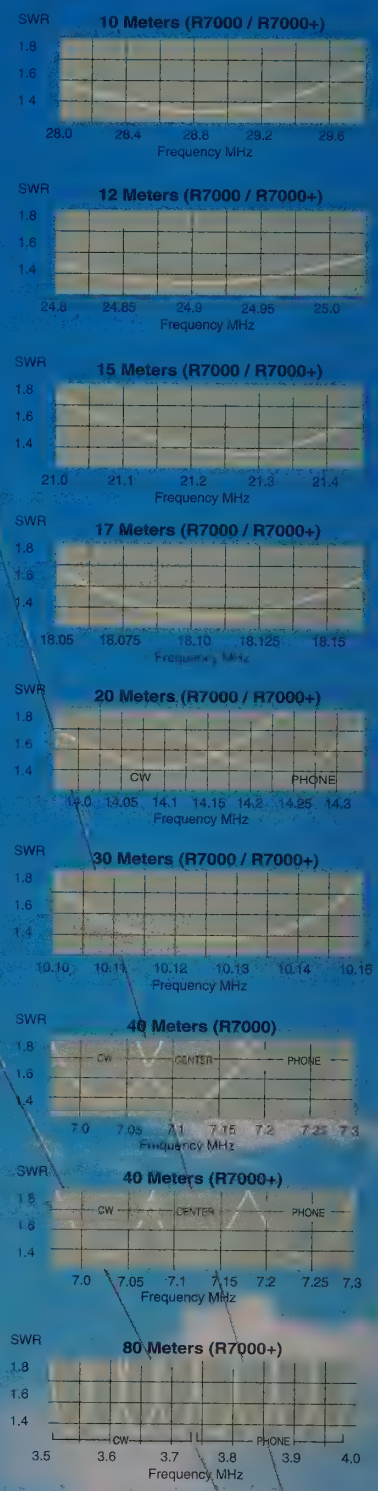
Here's what some of the very first R7000 users have to say.

"The antenna is well built. The instructions are very clear with very helpful diagrams . . . Seven bands right out of the box with no tuning is impressive. . . I really like the construction of this antenna, no loose lockwashers to chase around. All stainless steel hardware is top notch. Keep up the good work." WVØH

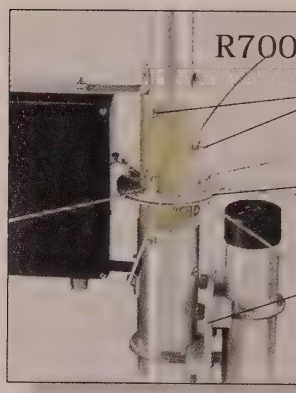
"The R7000 experienced several hours of 50 mph sustained wind with gusts 70 plus mph. I used the R7000 during this time and noticed no difference in performance . . . I was surprised by being able to easily work western European and western African stations on 17m (from North Dakota) " WBØOAJ

10, 12, 15, 17, 20, 30, 40, 80 Meters

R7000 Trap



R7000's Rugged Design

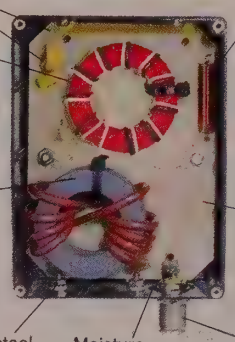


Generous use of stainless steel machine screws guarantees base integrity

Dual plate IG rod mount allows for easy assembly of ground components

Plate interfaced mounting system uses aluminum components and stainless steel hardware

R7000 Matching Network



Matching capacitors

Broadband matching transformer maintains low VSWR at feed point

Coaxial balun is employed to keep RF off from the exterior of your feedline

All stainless steel hardware

Moisture release vent

Feedpoint (SO239)

High strength, high power, low dielectric PC board material

RF choke effectively DC grounds the radiator to help prevent static electricity from entering your shack

R7000+

CUSHCRAFT

Cushcraft Corporation, Manchester, NH

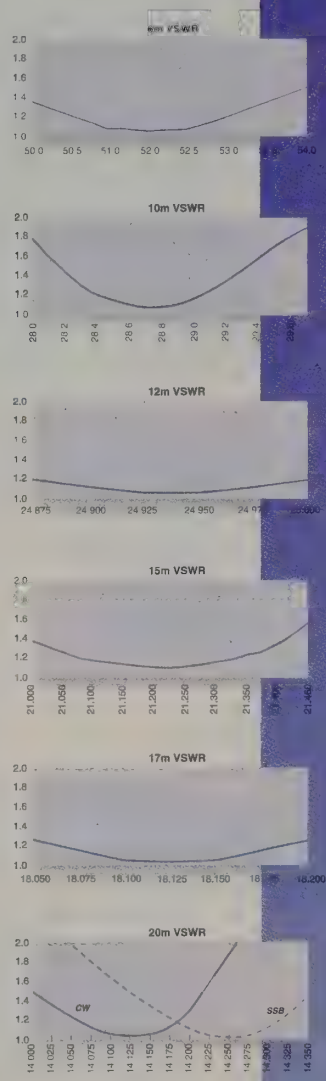
INTRODUCING R6000

6 - 20 Meters

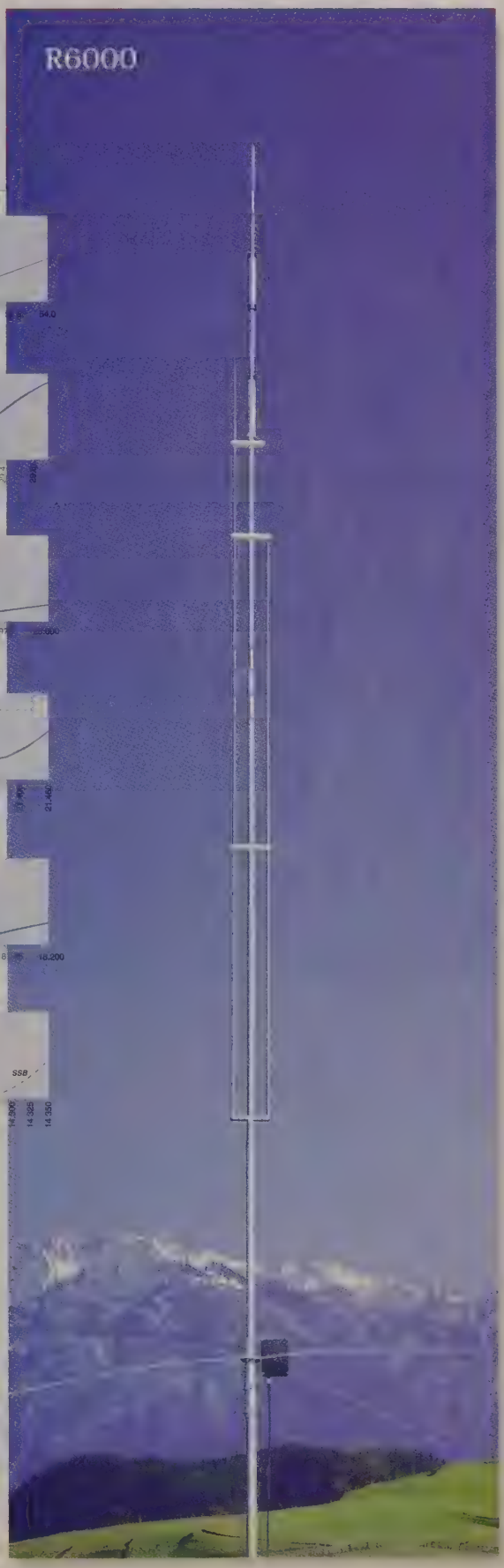
The Shape of Things to Come

The NEW R6000 is a 6 through 20 meter, no ground radial antenna. It includes many of the features of the R7000, R7 and R5 antennas. R6000 means excellent performance, easy installation and use, slim silhouette and high reliability. There are no traps used on 6, 10 and 15 meters for maximum efficiency and power handling.

- **EASY INSTALLATION**
  For typical use, tuning is not required
- **AUTOMATIC BAND CHANGING**
  To any band 6 through 20 meters
- **SLIM SILHOUETTE**
  Gain favor of family and neighbors with the slim, low profile of the R6000
- **6 METER OPERATION**
  Join the fun of the "Magic Band" and take advantage of the new HF/50MHz tranceivers
- **AFFORDABLE PRICE**
  Cushcraft delivers the best quality and performance at a price no one else can match.



SPECIFICATIONS	R6000
Frequency, meters	6, 10, 12, 15, 17, 20
Gain, dBi	3
VSWR minimum	1.2:1 typical
2:1 bandwidth, KHz	6m >3000
	10m >1700
	12m >100
	15m >450
	17m >100
	20m 300
Power ,Watts output	1500
Radiation angle, deg.	16
Horizontal rad, deg	360
Height, ft (m)	19 (5.8)
Mast size range, in	1.5 -1.75
(cm)	(3.8-4.4)
Wind load, ft2 (m2)	1.5 (.14)
Weight, lb (kg)	12.5 (5.6)



The R6000 employs quarter wavelength stubs on 10 and 15 meters to replace standard trap coils. The result is lower loss and wider bandwidth. The R6000 covers all bands 6 through 15 meters at a VSWR under 2:1. On 20 meters you can select the top 300 KHz or bottom 300 KHz of the band.

The R6000 weighs only 12-1/2 pounds (5.6 kg). It is lightweight and easy to mount for portable or permanent installations. Machined aluminum clamps and UV stable insulators guarantee years of reliable service. The R6000 comes with the standard Cushcraft warranty of one year from purchase - plus the industry's leading technical support team stands behind each Cushcraft antenna.

The R6000 makes an excellent diversity antenna to complement even the most complete stations. Or pack up the R6000 for a trip to the DX location of your dreams. With sunspots on the rise, amateurs worldwide are returning to the HF bands in large numbers. The R6000 will take you there first class for the exciting years ahead.

CUSHCRAFT

BIG THUNDER SERIES TRIBANDERS

10, 15, 20 Meters

X9 & X7

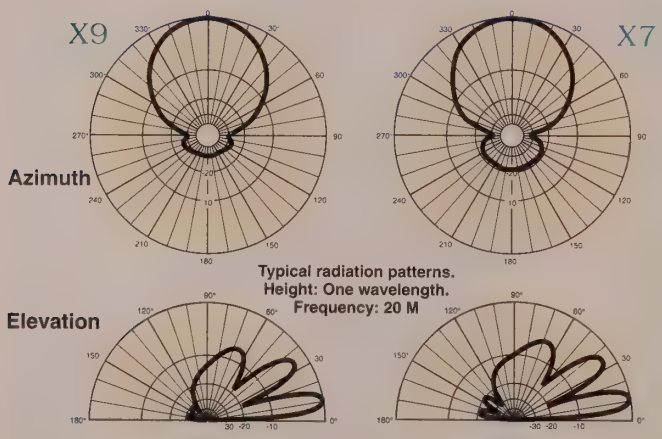
The new X9 and X7 Triband Yagis are geared to set new standards in both radiating performance and mechanical reliability. Cushcraft's product development team has employed the latest computer modeling technology to achieve a superior electrical design as well as elegant new mechanical hardware and assembly techniques.

Each mechanical component was designed to + MPH wind survival with a 1.25 safety factor. Traps were eliminated from the high current driven elements and reflectors using the new *4L Log Cell* design, which yields virtual monoband performance and maximum power handling capability. Traps are employed only in the lower current directors for increased gain and sharper pattern. The result is a truly high performance antenna family which will easily handle the legal limit.

Boom to Mast Clamp

Element to Boom Mounting

- New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern
- 100+ MPH Construction for Best Reliability and Long Life
- NEW 4L Log Cell Driven Elements for better VSWR Bandwidth
- Trapless Driven Elements and Reflectors for Reliable Power Handling
- Interleaved Element Design for Mono-Band Performance
- Add-on kits available for 40 Meters



Typical radiation patterns.
Height: One wavelength.
Frequency: 20 M

SPECIFICATIONS		X9	X7
Frequency Coverage (Meters)		10, 15, 20	10, 15, 20
Total number of Elements		9	7
Maximum Gain (dBi)	20M	13.0 @ 14 deg	12.5 @ 14 deg
@ One Wavelength	15M	13.9 @ 12 deg	13.0 @ 12 deg
Maximum Front to Back Ratio (dB)		30	30
Number of Elements per Band		4	3
VSWR Minimum		1.1:1	1.1:1
VSWR 1.5:1 Bandwidth (KHz)	20M	350	600
Longest Element, ft (m)		36.5 (11.12)	37.2 (11.33)
Turning Radius, ft (m)		21.7 (6.61)	20.0 (6.09)
Boom Length, ft (m)		28 (8.53)	18 (5.49)
Boom Diameter, in (cm)		2-1/2 (6.35)	2-1/2 (6.35)
Maximum Mast Diameter OD, in (cm)		2-1/2 (6.35)	2-1/2 (6.35)
Maximum Wind Survival, mph (kph)		>100 (>161)	>100 (>161)
Maximum Wind Surface Area, ft2 (m2)		9.9 (.92)	7.9 (.73)
Windload @ 80 mph, lb (kg)		255 (116)	202 (92)
Maximum Power Handling (KW)		2	2
Weight, lb. (kg)		85 (38.5)	60 (27.2)

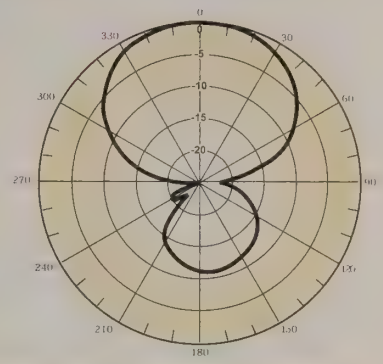
CUSHCRAFT

HF MULTIBAND BEAM

10 - 20 Meters

- **Easy To Tune**
  No complicated gamma matches to adjust.
- **Easy To Turn**
  With a boom length of 7 feet and a longest element length of 17 feet, a lightweight TV rotor will do the trick.
- **Low VSWR**
  Flat response across all 5 bands. VSWR minimum 1.2:1.
- **Single Feed Point**
  Only one coaxial feed line is necessary for all 5 bands.
- **Rugged Construction**
  Cushcraft's tried and true stainless steel mounting hardware and heavy wall aluminum tubing make for a rugged, long lasting antenna.

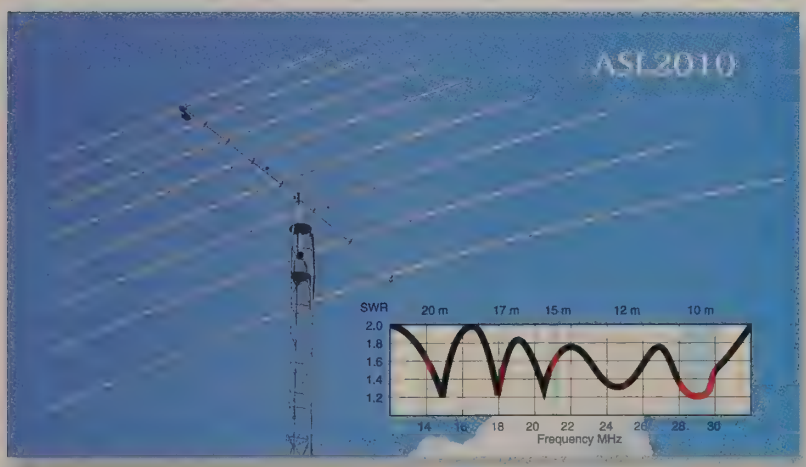
High Front To Back Ratio On 10/15/20m



MODEL						
Frequency, MHz	10	12	15	17	20	Meters
Elements	2	1	2	1	2	per band
Gain	5.3	1.0	4.8	1.0	3.6	dBi
Front to Back Ratio	10	0	12	0	22	dB
Sidelobe Attenuation	25	25	25	25	25	dB
VSWR 2:1 Bandwidth	665	>110	255	>100	90	kHz
Longest Element	17.1ft (5.2m)					
Turning Radius	8.8ft (2.7m)					
Boom Length	7.3ft (2.2m)					
Boom Diameter	1.5in (3.8cm)					
Max. Wind Surface Area	3.22 ft2 (.3m2)					
Max. Power Handling	1.2 kw					
Weight	26.5 ibs. (12kg)					

The Director, Small Footprint–Big Signal

MA5B. Cushcraft's newest multiband HF antenna provides 5 band directivity in a package small enough to mount to a tripod. The MA5B is a design that does not sacrifice ruggedness, performance and power handling for size and ease of installation.



Skylog

- Continuous five band coverage from 13.5 to 32 MHz
- Constan ver entire frequency range
- 6.4 dBi gain, 65 degree beamwidth
- High efficiency design, antenna stays cool and VSWR steady
- 18 foot boom and 19.5 foot turning radius

The ASL2010 log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

MODEL	ASL2010
Frequency, MHz	13.5-32
No. Elements	8
Forward Gain, dBi	6.4
Front to Back Ratio, dB	15-20
SWR 1.2:1 Typical	
2:1 Bandwidth	18.5 MHz
Power Rating, Watts PEP	2000
3dB Beamwidth, Degrees	
E Plane	65
Boom Length, ft (m)	18 (5.48)
Boom Diameter, in (cm)	2.0 (5.08)
Longest Element, ft (m)	38 (11.58)
Element Ctr Dia., in (cm)	1.25 (3.18)
Turning Radius, ft (m)	19.25 (5.86)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)
Wind Load, ft2 (m2)	10.1 (.93)
Weight, lb (kg)	55 (25.5)

CUSHCRAFT

10 - 40 M WORLD RANGER MULTIBAND HF YAGIS

A4S Four Element Beam - 10, 15 & 20 Meters

With stainless steel hardware.

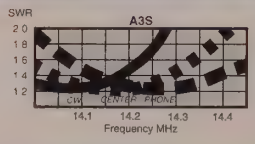
The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your HF work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. Our solid construction keeps the A4S on the tower! Add 40 meters with A744 kit.

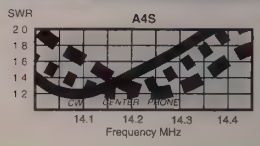
A3S Three Element Beam - 10, 15 & 20 Meters

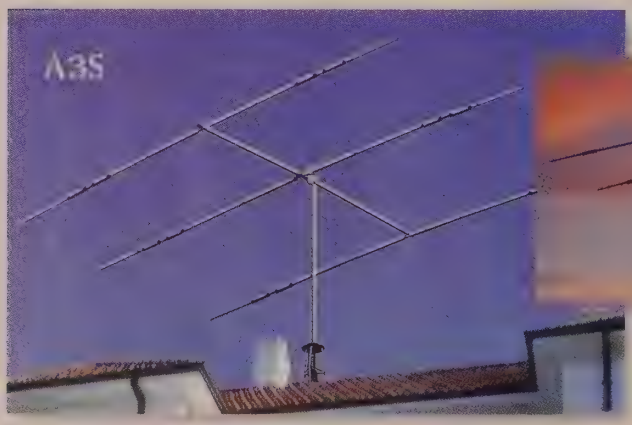
With stainless steel hardware.

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with All you need is a lightweight tower and rotator to enjoy the benefits of the A3S.

It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you! Add 40 meters with A743 kit.

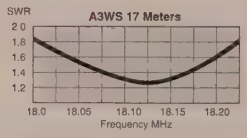


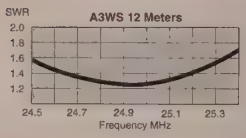




A3WS WARC Bands 3 Element - 12 & 17 Meters

Enjoy the excitement of the WARC bands with this popular beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.





Model	A4S	A3S	A3WS
Frequency, MHz	28, 21, 14	28, 21, 14	24, 18
No. Elements	4	3	3
Forward Gain, dBi	8.9	8.0	8.0
Front to Back Ratio, dB	25	25	25
SWR 1.2:1 Typical			
2:1 Bandwidth KHz	>500	>500	300
Power Rating, Watts PEP	2000	2000	2000
3 dB Beam Width, Deg. E Plane	58	60	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)	14 (4.27)
Boom Diameter, In (cm)	2 (5.10)	1.5 (3.81)	1.5 (3.81)
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)	25.1 (7.66)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)	14.4 (4.4)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft2 (m2)	5.50 (0.51)	4.36 (0.47)	4.1 (0.38)
Weight, lb (kg)	37 (16.8)	27 (12.9)	22.5 (10.2)

30 & 40 Meter Add-On Kits - For A3S, A4S & A3WS

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

A743 7 MHz/10 MHz kit for A3S
A744 7 MHz/10 MHz kit for A4S
A103 10 MHz kit for A3WS

Model	A743/744		A103
BAND	**7 MHz (40 m)**	**10 MHz (30m)**	**10 MHz (30m)**
Driven Element with Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 min. 28.4 max. (8.27-8.66)	32.1 (9.8)
Windloading ft2 (m2)	.58 (.05)	.27 (.03)	.45 (.04)
Bandwidth, KHz	125	150	250
Power Rating, Watts	2000 PEP	2000 PEP	2000 PEP
Side Rejection, dB	20	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)	3.25 (1.47)

Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

Model	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350 40>125	>500	>200
Power Rating Watts PEP	2000	2000	2000	2000
Length ft (m)	42.25 (12.88)	35.8 (10.92)	25.8 (7.86)	34.0 (10.37)
Mast Size, in(cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft2 (m2)	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)

CUSHCRAFT

NEW PRODUCTS

6/2 Meter,70 CM,

A627013S 6 Meter/2Meter/70 Centimeter

Cushcraft's newest multiband directional yagi is designed to provide hobbyists who have limited tower or mast space with directional antenna performance on three of the most popular bands. The A627013S combines 6 meters, 2 meters and 70 centimeters on one boom. Since the three antennas were designed to share a common boom, the A627013S solves the often encountered problem of degraded antenna performance due to inadequate spacing when using separates.

- **Outstanding performance thanks to Cushcraft's unmatched multiband design technology and experience.**
- **Rugged stainless steel mounting hardware is easy to install and maintain.**

Model	A627013S		
Frequency, MHz	50-54	144-148	430-450
No. Elements	3	5	5
Forward Gain, dBi	8	10	10
Front to Back Ratio, dB	20	20	18
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>4	>10
Power Rating, Watts PEP	1000	350	350
3dB Beamwidth, Degrees			
E Plane		48.5	48.5
H Plane		60	60
Boom Length, ft (m)		8.66 (2.66)	
Longest Element, in (cm)		117 (300)	
Turning Radius, ft (m)		6.16 (1.87)	
Mast Size Range, in (cm)		1.25-2 (3.2-5.1)	
Wind Load, ft^2 (m^2)		2.52 (0.23)	
Weight, lb (kg)		9.5 (4.3)	

Big Thunder Monobanders

XM240 - 40 Meter 2 Element Yagi. The famous 402CD two element 40 meter beam is now redesigned as the XM240. It features the same contest winning performance with a 90+ mph wind rating. A 2-1/2" OD boom and Big Thunder style 3/16" thick extruded element and boom plates are used to eliminate mechanical failures. A Phillystran boom truss and 1:1 high power balun are included.

Boom-to-Mast

Element Hardware

XM - 10, 15 & 20 Meter 5 Element Yagis. Cushcraft announces new 5 element Monobanders for 10, 15 & 20 meters. Each XM model has Big Thunder hardware and high wind ratings. Phillystran boom trusses are used on the 20 meter model. The feed systems are 50 ohm direct feed - dual driven elements. VSWR is flat across the band. A high power 1:1 balun is included. Big Thunder Monobanders were Beta tested at three extreme bad weather sites for the winter 1997/1998 season. They have excellent patterns and are perfect for stacks.

Model	XM20	XM15	XM10	XM10
Frequency, MHz	7.0 - 7.3	14.0 - 14.35	21.0 - 21.45	28.0 - 29.7
Number Elements	2	5	5	5
Forward Gain Free Space, dBi	6.0	9.3	9.3	9.3
Fwd Gain @ 1 Wavelength Ht, dBi @ 14 deg	12.5	14.4	14.4	14.4
Front to Back Ratio, dB	20-25	20-30	20-30	20-30
VSWR Typical Minimum	1.1:1	1.1:1	1.1:1	1.1:1
VSWR 1.5:1 Bandwidth, KHz	150	> 350	> 450	> 750
Power Rating, Watts Output	1500	1500	1500	1500
3dB Beamwidth, Degrees	70	52	52	52
Side Lobe Attenuation, dB	>35	>40	>40	>40
Boom Length, feet (m)	22 (6.7)	35 (10.7)	24 (7.3)	19 (5.8)
Boom Diameter, inches (cm)	2.5 (6.3)	2.5 (6.3)	2.5 (6.3)	2.5 (6.3)
Longest Element, feet (m)	43 (13.1)	36.3 (11.1)	24 (7.3)	18 (5.5)
Turning Radius, feet (m)	24.3 (7.4)	25.9 (7.9)	16.3 (5.0)	13.8 (4.2)
Max Mast Size, inches (cm)	2.5 (6.35)	2.5 (6.35)	2.5 (6.35)	2.5 (6.35)
Wind Surface Area, sq ft (sq m)	5.5 (.51)	9.2 (.85)	4.5 (.41)	3.4 (.32)
Wind Load @ 80 mph, lbs (kg)	142 (64.4)	250 (113.4)	115 (52.3)	78 (35.5)
Weight, lbs (kg)	55 (25)	92 (41.8)	47 (21.1)	38 (17.2)

CUSHCRAFT

DUAL BAND RINGOS & YAGIS

70 CM, 2 Meters

Cushcraft is the leader in dual band antennas. Our verticals provide excellent coverage at a price below the competition. The AR270 and AR270B are favorites with the AO27 crowd. For increased coverage, our dual band Yagis lead the way. Both Yagis require only one coax feedline for true dual band performance.

AR270B 5.5/7.5 dB Dual Band Ringo

This model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

AR270

The "Dual Wonder" AR270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm

MODEL	AR270		AR270B	
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical 2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dBi	3.0	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		6.75 (17.1)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.47 (0.044)	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	

A27010S and A2706S
10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our fully illustrated assembly manuals.

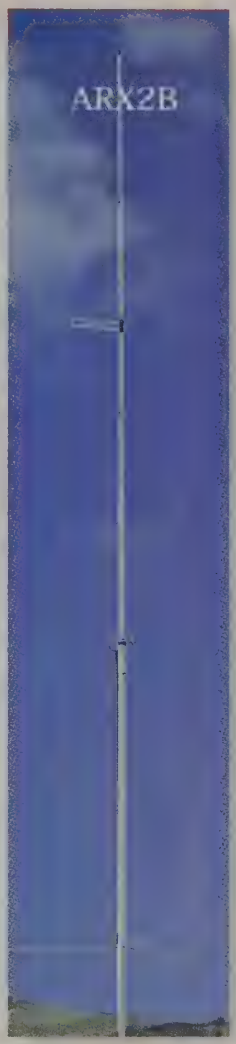
Cushcraft pioneered dual band side-by-side Yagis. The harmonic relationship of 2 meters and 70 cm allow clean radiation patterns with minimal interaction.

MODEL	A27010S		A2706S	
Frequency, MHZ	144-148	430-450	144-148	430-450
No. Elements	5	5	3	3
Forward Gain, dBi	10	10	7.8	7.8
Front to Back Ratio, dB	20	18	20	18
SWR 1.2:1 Typical 2:1 Bandwidth, MHz	≥4	≥10	≥4	≥20
Power Rating, Watts PEP	350	350	350	350
3dB Beamwidth, Degrees				
E Plane	52	52	66	66
H Plane	60	60	108	108
Boom Length, ft (m)	6.17 (1.9)		2.8 (.85)	
Longest Element, in (cm)	40.3 (102.4)		41 (104.1)	
Turning Radius, ft (m)	6 (1.8)		2.8 (.85)	
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Wind Load, ft2 (m2)	.725 (.07)		.3 (.02)	
Weight, lb (kg)	1.8 (.81)		1.7 (.8)	

CUSHCRAFT

RINGO RANGER II, RINGO RANGER, RINGO

70 CM, 1 1/4 M, 2 M



Some hams comment on the ARX2B:
"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time."

"ARX2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX2B...the best antenna." (XE2CLB)

Our Ringos are Number One.

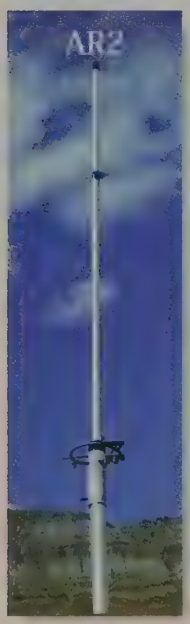
Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance.

MODEL	ARX2B	ARX220B	ARX450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dBi	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft, (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft^2 (m^2)	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)



Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR2	AR6	AR10	AR450
Frequency, MHz	135-160	50-54	28-29.7	440-460
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	10	2	>1.5	20
Gain, dBi	3	3	3	3
Power Rating, Watts FM	1000	1000	1000	500
Radiation Angle, Deg.	16	16	16	16
Horizontal Radiation Pattern, Degrees	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	3.5 (8.9)
Radiator Base Dia, in(cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.5 (1.3)
Height, ft, (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	1.4 (.43
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft^2 (m^2)	.21 (.02)	.37 (.03)	1.68 (.16)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1 (.45)

CUSHCRAFT

6 & 10 METER YAGIS

6176B

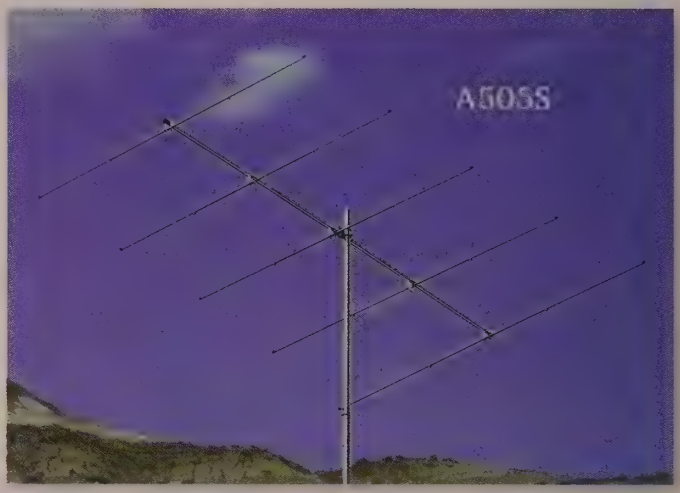
The 6176B is the favorite 6 meter contest/DX antenna for all the "Big guns". Extra wide element spacing gives maximum gain and a clean pattern. Even with a 34 foot (10.4m) boom, the 6176B weighs only 26 pounds (11.8 kg).

10 Meters

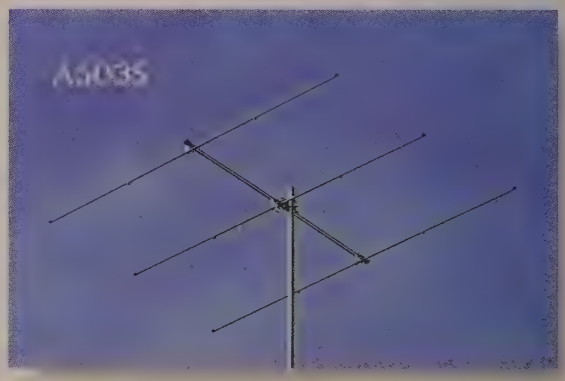
Looking for a lightweight, economical alternative to the 10 meter big boys? Choose the TEN3. Although it's popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom (2.4m) making it easy to install on a very simple mount with only a light rotator. The matching system is our proven Reddi-Match for 50 Ohm no balun feed and SO-238 connector. Make more positive contacts with the TEN3.

6 Meter Yagis - SSB/CW/FM

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis. The A503S, A505S and A506S may be mounted vertically for FM use.



MODEL	A503S	A505S	A506S	A507S	TEN3
Frequency, MHZ	50-54	50-54	50-54	50-51	28-29.7
No. Elements	3	5	6	6	3
Forward Gain, dBi	8	10.5	11.6	14.0	8
Front to Back Ratio, dB	20	24	26	30	25
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	>1	>1	>1	>1	>1.5
Power Rating, Watts PEP	1000	1000	1000	2000	2000
3dB Beamwidth, Degrees					
E Plane	76	56	48	2 x 19	64
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)	34 (10.36)	8 (2.44)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)	117 (297.2)	18 (5.49)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)	17.7 (5.39)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft2 (m2)	1.80 (0.17)	2.9 (0.273)	4.46 (.41)	4.8 (.45)	2.0 (.20)
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)	26 (11.79)	9.9 (4.45)



CUSHCRAFT

BOOMER SIDEBAND/CW YAGIS

2 Meters

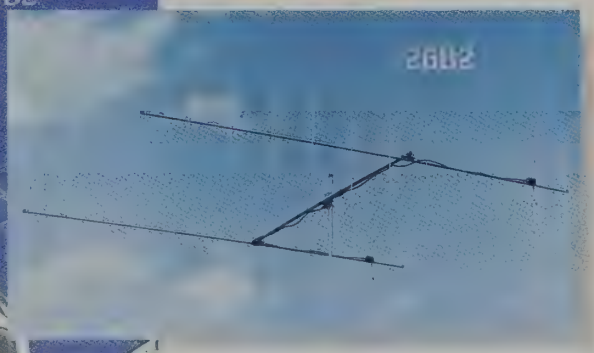
13B2 -13 Element Wideband Boomer

The 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBi gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector. Model **13B2N** has N connector.

17B2 - 17 Element CW/SSB Boomer

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBi gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector.

The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.



26B2 - 26 Element Wideband Boomer

This antenna offers the highest gain of any 2 meter FM antenna in the world. The 26B2 includes two complete 13B2 antennas, stacking boom and

124WB - 4 Element Wideband Boomer

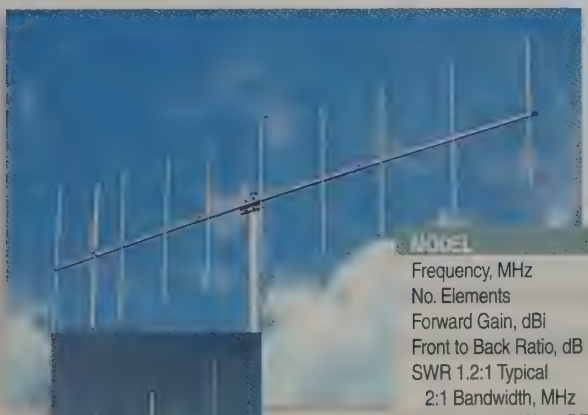
This is the right choice for packet systems and other applications requiring a dedicated directional

A14810S & A1483S 2M Yagis

These antennas are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain to give you better FM coverage.

The A1483S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

A14810S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.



MODEL	17B2	17B2	124WB	26B2	A1483S	A14810S
Frequency, MHz	144-148	144-145	144-148	144-148	144-148	144-148
No. Elements	13	17	4	26	3	10
Forward Gain, dBi	15.8	18.0	10.2	18.8	7.8	13.2
Front to Back Ratio, dB	26	26	19	26		
SWR 1.2:1 Typical						
2:1 Bandwidth, MHz	>4	>2	4	>4	>5	≥4
Power Rating, Watts PEP	2000	2000	2000	2000	1000	1000
3 dB Beamwidth, Degrees						
E Plane	2 x 18	2 x 14.5	60	2x18	66	40
H Plane	2 x 19	2 x 15	88	2x9.5	108	46
Side Lobe Atten., dB, E Plane	>60	>60	40	>60		
Boom Length, ft (m)	15 (4.57)	31 (9.45)	4 (1.22)	15 (4.57)	2.8 (.85)	12 (3.6)
Electrical Wavelength	2.2	4.5	.5	2.2		
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)	40.75 (104)	39.75 (101)	41 (104.1)	40.3 (102.4)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)	4 (1.22)	10.4 (3.18)	2.8 (.8)	6 (1.8)
Mast Size Range, in (cm)	1.5-2	1.5-2	1.25-2	1.5-2	1.25-2	1.25-2
	(3.8-5.1)	(3.8-5.1)	(3.2-5.1)	(3.8-5.1)	(3.2-5.1)	(3.2-5.1)
Wind Load, ft2 (m2)	1.8 (.17)	3.9 (.36)	.34 (.034)	4.84 (.45)	.27 (.02)	1.21 (.11)
Weight, lb (kg)	6.7 (.31)	15.75 (7.14)	3 (1.36)	21.5 (9.75)	1.5 (.7)	6 (2.7)

CUSHCRAFT

A14820T 2 Meter Hi-Lo Cross Yagi

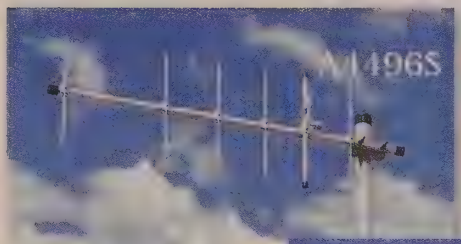
Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBi gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel. Separate coax feeds allow polarization changes.

A14820T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 ft2 (.11m2), and a mast size of 1.25-2 in. (3.2-5.1 cm).

224WB/225WB

220 MHz Widebands

These 222 MHz beams are perfect for Packet, FM repeaters, or sideband/CW. Both antennas can be mounted for vertical or horizontal polarization.



A4496S/A44911S

Use one of these 440 MHz beams for your FM/Packet needs. Both work great for vertical or horizontal polarization.

MODEL	224WB	225WB	A14820T
Frequency, MHZ	222-225	222-225	144-148
No. Elements	4	15	10/10
Forward Gain, dBi	10.2	15.5	13
Front to Back Ratio, dB	24	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	>5	>4
Power Rating, Watts PEP	2000	2000	1000
3dB Beamwidth, Degrees			
E Plane	60	2x17	45
H Plane	88	2x19	50
Side Lobe Attenuation, dB E Plane	40	60	40
Boom Length, ft (m)	3 (.91)	10 (3.05)	11(3.4)
Electrical Wavelength	0.5	2.2	1.6
Longest Element, in (cm)	26.7 (68)	26.3 (67)	40.6 (103)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)	7.5 (2.3)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)
Wind Load, ft2 (m2)	.23 (.021)	.95 (.09)	0.39(0.11)
Weight, lb (kg)	1.7 (.77)	5.25 (2.4)	7 (3.15)

MODEL	719B	13B2	A4496S	A44911S
Frequency, MHz	430-450	430-440	440-450	440-450
No. Elements	19	29	6	11
Forward Gain, dBi	15.5	17.8	10.5	13.2
Front to Back Ratio, dB	25	25	18	20
SWR 1.2:1 Typical				
2:1 Bandwidth MHz	20	>10	>10	>10
Power Rating, Watts PEP	2000	2000	350	350
3 dB Beamwidth, Degrees				
E Plane	24	20	60	48
H Plane	19	22		
Side Lobe Atten., dB, E Plane	60	60		
Boom Length, ft (m)	13.5 (4.1)	22.17 (6.75)	2.9 (0.89)	4.2 (1.35)
Electrical Wavelength	6	9.8		
Longest Element, in (cm)	13.75 (34.9)	13.75 (34.9)	13 (33)	13 (33)
Turning Radius, ft (m)	7.25 (2.2)	12.5 (3.8)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-3.8)
Wind Load, ft2(m2)	1.2 (.11)	2.2 (.21)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	5.6 (2.55)	8.6 (3.9)	3 (1.4)	4 (1.8)

719B FM, CW and SSB 15.5 dBi

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.

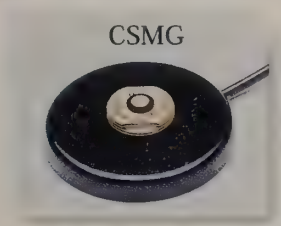
CUSHCRAFT

MOBILE ANTENNAS

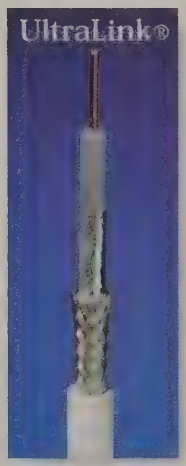
Cushcraft mobiles offer the high performance that you need for consistent mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY

BLACK MAG MOUNT



TRUNK LIP MOUNT



CS28M Ten Meter Mag-Mount

The CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink® low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL259 connector are included with the CS28M.

CS Series Economy Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors and coil contacts are silver plated for better RF conductivity. All Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar- metal joints. Our mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known

UltraLink® Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

CS270M Dual Band Mag-Mount

The CS270M 2 meter/70 cm dual band mobile antenna leads the industry in performance, quality and value. The weather sealed base, stainless whip, enclosed coil and 90 pound pull magnet at such a low price is a real bargin.

CSMG Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 and 165 pound pull magnets are the best you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish.

® cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

Model No.	Frequency Mhz	Whip Length Inches	Gain dBi	Description
Dualband 2m/70cm				
CS270A	144-148 & 430-450	34	0.86	NMO mount required
CS270M	144-148 & 430-450	34	0.86	NMO, includes Magnet Mount
10 Meters				
CS28M	28-30	49	1.25	NMO, includes Magnet Mount
6 Meters				
CS50M	46-54	49	1.25	NMO, includes Magnet Mount
2 Meters				
CG144A	144-148	49	1.25	NMO mount required
CS147A	144-148	49	1.25	NMO mount required
CS147M	144-148	49	1.25	NMO, includes Magnet Mount
222 MHz				
CS220M	222-225	33	0.84	NMO, includes Magnet Mount
440 MHz				
CS450M	430-450	29.5	0.75	NMO, includes Magnet Mount

Mobile Mounts

CSMG	90 lb pull magnet, NMO mount, PL259 & 12 feet UltraLink Cable
CSMGN	90 lb pull magnet, NMO mount, N connector & 12 feet UltraLink Cable

For "Gold" Antennas

CGMGN	165 lb pull magnet, NMO mount, N connector & 12 feet UltraLink Cable
CSTL	Trunk lid mount, NMO mount, PL259 & 12 feet UltraLink Cable

CUSHCRAFT

ACCESSORIES

Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from unplanned current surges with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds-much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

With UHF connector models - 1 MHz to 500 MHz.
With N connector models - 1 MHz to 3000 MHz

LAC4	200 Watt with UHF SO-239 connectors
LAC4H	2 kW with UHF SO-239 connectors
LAC4N	200 Watt with N connectors
LAC4NH	2 kW with N connectors
LC2	200 Watt replacement cartridge
LC2KW	2 kW replacement cartridge

Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

PD-2	for two 13B2, UHF connectors
PD-4	for four 13B2, UHF connectors
PD-4N	for four 17B2, N connectors

Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

22-SK	for two 13B2's
22N-SK	for two 17B2's
26B2VPK	stacking kit for two 13B2's. Harnesses, stacking boom and hardware included.

- One year warranty backed by our 40 years of antenna experience.
- Cushcraft antennas are designed to survive 80 mph (129 kph) winds unless
- For safe antenna installations, avoid contact with powerlines.
- The use of lightning arresters is highly recommended.
- Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.
- Support mast, feedline and RF chokes are not included with antennas.
- Specifications are subject to change without notice.
- All Cushcraft antennas are available through dealers worldwide.

BOOMER STACKING INFORMATION

Antenna	2x17-6a	2x13B2	4x13B2	2x17B2	4x17B2
Forward Gain, dBi	17.0	18.8	21.8	21.0	24.0
Front/Back Ratio	30	24	24	24	24
E-Plane Beamwidth,deg	2x17.5	2x18	2x9	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7.5	2x7.5
Vert, ft	26	9.2	9.2	11.5	11.5
(m)	7.92	2.8	2.8	3.5	3.5
Horiz, ft	-	-	9.6	-	12
(m)	-	-	3.0	-	3.7
Approximate Wt, lb	62	22	44	32.5	115
(kg)	28.12	10.00	20.00	14.8	52.3

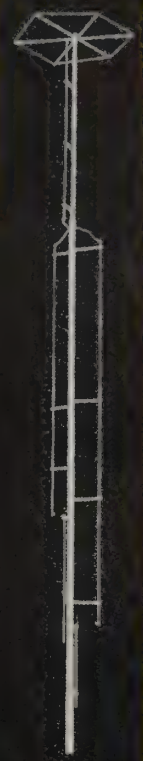
CUSHCRAFT

GAP: THE PERFECT ANTENNA

We at GAP realize there isn't a perfect antenna. No singular antenna will scream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.

Eagle DX

Challenger DX



Voyager DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the **ENTIRE BAND**.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

A GAP antenna has no traps, coils or transformers. This is important. The greatest sources of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

CQ–"The GAP consistently outperformed base-fed antennas. .and was quieter."

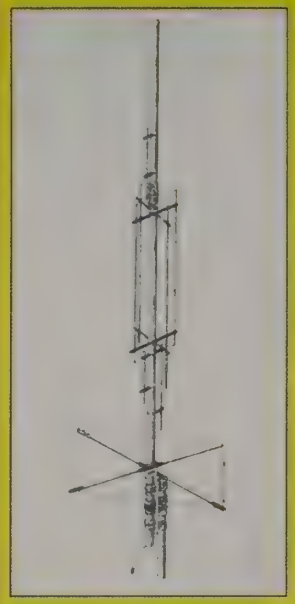
73–"This is a real DX antenna, much quieter than other verticals."

RF–"To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP, there was no comparison. Signals were always stronger on the GAP, sometimes by S units, not just DB's."

Worldradio – "These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if is fed in the center."

IEEE–"Near field and power density analyses show another advantage of this antenna (asymmetric vertical dipole): it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."

Latest Release: **TITAN DX**



This all purpose antenna is designed to operate 10m-80m, WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

MODEL	BANDS OF OPERATION											HT	WT	MOUNT	COUNTER-POISE	COST
	2m	6m	10m	12m	15m	17m	20m	30m	40m	80m	160m					
Challenger DX	■	■	■	■	■		■		■	■		31.5'	21 lbs	Drop In Ground Mount	3 Wires @ 25'	
Eagle DX			■	■	■	■	■		■			21.5'	19 lbs	1-1/4" pipe	80" Rigid	
Titan DX			■	■	■	■	■	■	■	■		25'	25 lbs	1-1/4" pipe	80" Rigid	
Voyager DX							■		■	■	■	45'	39 lbs	Hinged Base	3 Wires @ 57'	

GAP

ANTENNA PRODUCTS, INC.
99 N. Willow Street
Fellsmere, FL 32948
tel: (561)-571-9922
web: gapantenna.com

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*See Price List for **GAP** Quick-Tilt Mounts, Counterpoise and Guy Kit Prices*

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The Standard By Which All Others Are Judged.

Acclaimed as the technological leader in single & multiband antennas

- Wide-band Performance • Factory Adjusted–No Tuning Required • Highest Gain
- UPS Shippable • High Wind Rating • Fiberglass Radome • DC Grounded • Stainless Hardware

X500HA (UHF-Conn.)
X500HNA (Type-N Conn.)
Ruggedized Base/Repeater Antenna

COAX CONNECTION AT BASE END

HEAVY DUTY BASE/ RADIAL ASSEMBLY

STRONG JOINT COUPLINGS

X50NA

The X50NA is an excellent choice where ruggedness is required in a medium–gain, dual-band, base/repeater application.

Features

- Wide frequency bandwidth
- Heavy duty fiberglass radome
- Stainless steel mounting hardware and radials
- Type–N Cable connection
- Compact size for easy mounting/ installation

Specifications:

Freq.: 2m: 144–148MHz
70cm: 440-450MHz
Gain: 2m: 4.5dB; 70cm: 7.2 dB
Power: 200 watts
Wind Rating: 135 MPH (no ice)
Height: 5.6 feet

X500HNA

Diamond Antenna's best base station repeater antenna. Designed for strength and performance, the X500HNA is pretuned to achieve maximum gain in both the 2m and 70cm amateur bands.

Features

- Heavy duty fiberglass radome
- Overlapping outer shells for added strength
- Stainless steel mounting hardware and radials
- Strong–waterproof joint couplings
- Type–N Cable connection
- Wide band performance

Specifications:

Freq.: 2m: 144–148MHz
70cm: 440-450MHz
Gain: 2m: 8.3dB; 70cm: 11.7 dB
Power: 200 watts
Wind Rating: 90 MPH (no ice)
Height: 17.8 feet

X50NA

X500HNA

DIAMOND Mono-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
CP22E [1]	144	6.5	200	UHF	9.0	90
DPGH62 [1,6]	50	6.0	200	UHF	21.0	78
F22A	144	6.7	200	UHF	10.5	112
F23A	144	7.8	200	UHF	15.0	90
F142A	222	5.5	150	UHF	6.0	110
F718A [2]	440	11.5	250	N	15.0	90
F1230A	1240	13.5	100	N	10.5	90

DIAMOND Dual-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
X50A	144/440	4.5/7.2	200	UHF	5.6	135
X50NA	144/440	4.5/7.2	200	N	5.6	135
X200A	144/440	6.0/8.0	200	UHF	8.3	112
X300A	144/440	6.5/9.0	200	UHF	10.2	112
X510NA [3]	144/440	8.3/11.7	200	N	17.2	90
X510MA	144/440	8.3/11.7	200	UHF	17.2	90
X500HNA	144/440	8.3/11.7	200	N	17.8	90+
X700HNA	144/440	9.3/13.0	200	N	24.0	90
X2200A	144/222	6.0/7.8	150	UHF	11.5	112
U200	440/1240	8.3/11.7	100	N	5.9	135

DIAMOND Tri-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
U5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V2000A [4,6]	52/144/440	2.1/6.2/8.4	150	UHF	8.3	110
X3200A [5]	146/222/440	6.0/7.8/8.0	100/200	UHF	10.5	112
X6000A	144/440/1240	6.5/9.0/10.0	100/60	N	10.5	112

1 Heavy duty aluminum construction.
2 F-718A: 440-450MHz., F718L: 420-430MHz.
3 X510NJ: 144-147/430-440MHz.
4 1/4λ rated in dBi. Most requirement: 1.4"-2.4".
5 2m: 146-148; 100 watts
6 52-54MHz. only; DPGH62 adjustable from 50-54MHz.

BAND: 144=144-148MHz., 222=222-225MHz., 420=420-430MHz.,430=430-440MHz., 440=440 450MHz., 1240=1240-1300MHz.

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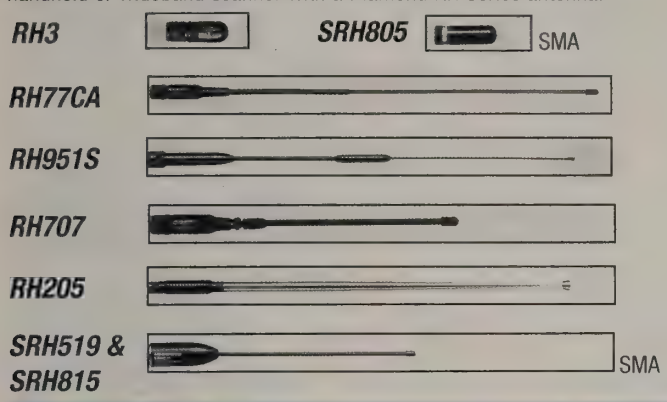
Duplexers & Triplexers
Dummy Loads & Coaxial Switches

RH Series

High quality, high gain HT antennas for mono, dual, and tri-band handheld radios. Available in both BNC and SMA connections. Increase the performance on your handheld or wideband scanner with a Diamond RH Series antenna.



MODEL	DESCRIPTION	RELATIVE GAIN*
DT30J	Wideband discone 25-1300 MHz. 200 W transmit 50-1300 MHz. No cable.	N/A
RH3	2m/70m dual band "Black Bullet" HT antenna. 1.75" BNC. 120 to 900 receive	-2 dB
RH77CA	High gain 2m/70cm dual band HT antenna. Receive range to 900 MHz. BNC.	+6 dB
RH205	2m HT antenna, telescopic, 5/8λ fully extended, 47.5"; 1/4λ retracted, 9"	+9 dB
RH519	2m/70cm slim dual-band HT antenna. Flexible. 8" BNC, 10 watts.	+3 dB
RH707	2m/70cm dual-band -tiltable whip – HT antenna. 8 1/4" BNC.	+3 dB
RH951S	High gain 2m/70cm/23cm slim tri-band HT antenna. Flexible. BNC (Wide band receive)	+6 dB
SRH519	2m/70cm dual-band HT antenna. Flexible. 8" SMA, 10 watts.	+3 dB
SRH805	2m/70cm/23cm tri-band HT antenna. 1.75" SMA, 10 watts.	-2 dB
SRH815	2m/70cm/23cm tri-band HT antenna. Flexible. 6" SMA, 10 watts.	+3dB

*Rated against typical stock HT antennas.

CP SERIES HF MULTIBAND VERTICAL

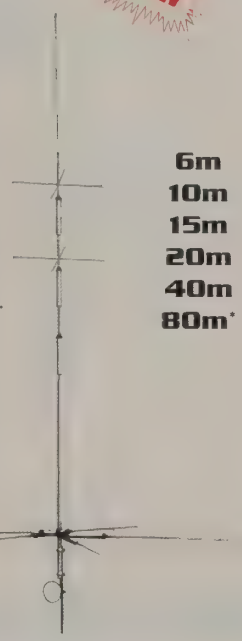
The CP5 and CP6 are multi-band trap-vertical antennas for HF bands, covering the 80*, 40, 20, 15 and 10m amateur bands. The CP6 also includes 6m band. Made from heavy-duty aluminum, the CP5 and CP6 are easily assembled, yielding excellent performance and reliability from a compact base station antenna. No additional ground radials required. Mounting hardware included.

*80m CW only. SSB requires a tuner.

NEW

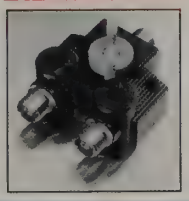
Specifications

Frequency:		
CP5	80*/40/20/15/10m	
CP6	80*/40/20/15/10/6m	
Power:	200w PEP	
Impedance:	50Ω	
VSWR:	1.5:1 nominal	
Element:	1/4 wave trap vertical	
Radials:	Trap design	
	CP5 - five	
	CP6 - six	
Grounding:	Direct grounding. Antenna element & radials connected to mounting pipe.	
Max. Wind Rating:	80mph (no ice)	
Mast Diameter Accatance:	1.2-2.4"	
Overall Length:	15.10' (4.6m)	
Weight:	9.9lbs. (4.9kg)	
Connector:	SO-239 female UHF	
Bandwidth: (for nominal 1.5:1 VSWR without antenna tuner)	80m	20kHz
	40m	40kHz
	20m	100kHz
	15m	200kHz
	10m	500kHz
	6m	3.5MHz

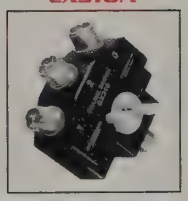


DL30A/DL30N

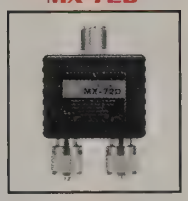
CX210A/CX210N



CX310A

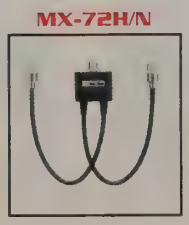


MX-72D



MODEL	DESCRIPTION
CX210A	Heavy duty wideband coax switch, DC-1000 MHz. 1.5 kW, SO-239
CX210N	Heavy duty wideband coax switch, DC-1500 MHz. 1.5 kW, Type N
CX310A	Heavy duty wideband coax switch, 3 position, DC–800MHz, SO–239
DL30A	Dummy load, DC-500 MHz. 15w average/100w peak. PL-259
DL30N	Dummy load, DC-500MHz. 15w average/100w peak. Type N

MX-72H/N



Duplexers/Triplexers

MODEL	MX72D	MX72H	MX72N	MX2000		MX2000D
FREQUENCY BAND (MHz)	LPF 1.6-30	140-150	HPF 400-460	LPF 1.6-60	BPF 110-170	HPF 300-950
PWR CW (ICAS) WATTS P.E.P.	400 1000	150 400	100 250	800	800	500
THRU LOSS/dB	0.15	0.15	0.25	0.15	0.2	0.25
ISOL	60dB			60dB		
VSWR	1.2:1			1.2:1		
CONNECTOR COMPLEMENT	M MIX 144 430 M M	M MIX 144 430 M M	M MIX 144 430 M N	M MIX 50 144 430 M M M		M MIX 50 144 430 M M M
CONNECTOR	Direct	12" Cable w/Connectors		12" Cable w/Connectors		Direct

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You've seen the rest...now own the BEST!

SG2000HD | SG7500A SG7500NMO | SG7900A | NR72BNMO | NR73BNMO | NR2C | NR770HA NR770HB | NR770HNMO NR770HBNMO | CR627B CR627BNMO

MV3A Mobile Antenna System

For New HF/VHF transceivers.

Models: HV7A 5-Band HF/VHF NEW!
MV3A 4-Band HF/VHF

Optional Loading Coils

HVC7	40m
HVC14	20m
HVC18	17m
HVC21	15m

Recommended Antenna Mounts: K400C or K600M

MX62M Duplexer

Specifications:
HF/6m & 2m/70cm bands
1.6-56 MHz LPF
76–470 MHz HPF
(76–120 receive only)
Watts: 600 P.E.P.
Loss: 0.2 dB LPF
0.3 dB HPF
Isol.: 50 dB

The NEW HV7A has 5 band capability: 70cm, 2m, 6m, plus 2 HF bands through use of loading coils. MV3A has 4 band capability: 2m, 6m*, plus 2 HF bands through use of loading coils (*6m=52-54 MHz MV3A).

Bands Supplied:	10m/6m/2m/70cm (HV7A) 10m/6m*/2m (MV3A)
Opt. Loading Coils:	40m/20m/17m/15m 6MSSB-EXT (MV3A)
Power, P.E.P.:	HF 120w/VHF 200w
Mount Connection:	UHF
Length:	54" (HV7A); 57" (MV3A)
SWR:	1.5:1 nominal

MX62M

Use with HF/VHF mobile transceivers such as IC706 series, FT100, or combine 2m/70cm and HF rigs.

SPECIAL FEATURES:

- Factory pre-tuned/no adjustment
- Highest Performance antennas
- NMO and UHF (PO) base styles
- 24 Kt gold plated connector pin
- No grounding required unless noted
- Fold-over feature on most models

FOLD-OVER

Patented One-Touch Fold-over Feature (Not available on NR72BNMO, NR73BNMO, & NR770SA.)

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
NR72BNMO*6	2m/70cm	2.15	100	NMO	13.8	1/4λ, 1/2λ
NR73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2λ, 1-5/8λ
NR770SA*6	2m/70cm	2.15/2.15	100	UHF	16.9	1/4λ, 1/2λ
NR770HA7	2m/70cm	3.0/5.5	200	UHF	40.2	1/2λ, 2-5/8λ
NR770HNMO8	2m/70cm	3.0/5.5	200	NMO	38.2	1/2λ, 2-5/8λ
NR770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2λ, 2-5/8λ
SG7000A*6	2m/70cm	2.15/3.8	100	UHF	18.5	1/4λ, 6/8λ
SG7200NMO	2m/70cm	3.2/5.7	150	NMO	36.6	1/2λ, 2-5/8λ
SG7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2λ, 2-5/8λ
SG7500NMO	2m/70cm	3.5/6.0	150	NMO	41.0	1/2λ, 2-5/8λ
SG7900A*	2m/70cm	5.0/7.6	150	UHF	62.2	7/8λ, 3-5/8λ
SG9600*6,9	6m/2m/70cm	–/2.15/5.2	60	UHF	33	1/4λ, 1/2λ, 2-5/8λ

1/4λ rated in dBi.

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
NR2C	2m	4.1	150	UHF	55.5	1/2λ+1/4λ
SG2000HD*	2m	5.2	250	UHF	62.6	1/2λ+3/8λ
SG6000NMO*6,9	6m	2.1	150	NMO	39	1/4λ
NR140A	1-1/4m	3.8	100	UHF	36.2	5/8λ
NR124	23cm	8.4	100	N	25	4-5/8λ
CR214S*6	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2λ, 5/8λ
CR224A*6	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8λ, 2-5/8λ
CR320A*6	2m/1-1/4m 70cm	2.15/3.8/ 5.5	200 100/200	UHF	37.4	1/4λ, 1/2λ 2-5/8λ
CR627B*6,9 CR627BNMO*6,9	6m/2m/ 70cm	2.1/4.5/ 7.2	120	UHF NMO	60	1/4λ, 1/2+1/4λ/ 2-5/8λ
NR2000NA	2m/70cm 23cm	3.15/6.3/ 9.7	100	N	39	1/2λ, 2-5/8λ 5-5/8λ

* Not recommended for Magnet Mount
6 Grounding required.
7 NR770HB same specifications but in black finish.
8 NR770HBNMO same specifications but in black finish.
9 52-54MHz only

www.rfparts.com/diamond

Diamond Antenna Division of RF Parts Co. Tel: (760) 744-0900 • FAX: (760) 744-1943 • E-mail: rfp@rfparts.com

DIAMOND'S Premium Antenna Mounts & Cable Assemblies

Designed for today's high performance antennas

K9000 Motorized Mount

Raise and lower your antenna with a touch of the button with Diamond's K9000 motorized mount.

- K9000TM. Trunk & hatchback installations.
- K9000LRM. Luggage rack installations.
- Accepts "Ground Independant" Antennas up to 45" Length.
- 0-90° Range. Operates from 12VDC with fused cigarette plug.
- Compatible with Diamond C-Series Base/cable assemblies.
- Recommended Antennas: SG7200NMO, SG7500NMO, NR73BNMO, SG7500A, NR2C & NR770 Series.

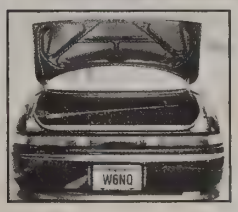
K601 Hide-away Antenna Mount

As easy as 1, 2, 3– the K601 Hide-Away Mount folds antenna safely into the trunk. Fully adjustable, fits most vehicles.

K601 HIDE-AWAY TRUNK MOUNT

Color: Black. Choice of NMO or UHF base.

Recommended antennas: NR2C, NR73BNMO, NR770HNMO, NR770HA NR770HBNMO, NR770HB, NR770RA, SG7200NMO SG7500A & SG7500NMO.



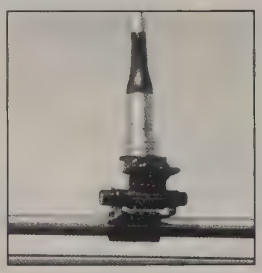
K601M–UHF Base
K601NMO–NMO Base
C110 10' extension cable for front radio installations.

K600

Variable Angle Trunk Mount

Deluxe aerodynamic trunk mount. Vertical adjustment range 0-9%. Four set screw, stainless steel mount assembly.

K600M SO-239 base, 16.5' coax & PL-259
K600P SO-239 base, 16.5' coax & type N



K550

Luggage Rack Mount

Adjustable luggage rack mount for new mini vans.

K550KM SO-239 base, 16.5' coax & PL-259
K550 Mount Only

K702M

Magnet Mount Base

Deluxe low profile magnet mount with high holding power. Aerodynamic styling, large 6 3/8" diameter, 3/4" height. For VHF/UHF antennas up to 50" height. Includes thin mylar protective sheet to enhance grip and protect vehicle paint. Cable: 13' RG58A/U & PL-259.

K400

Hatchback/Door Truck Lid Mount

Diamond's deluxe heavy duty mount. Two-axis adjustable. Recommended for high gain VHF/UHF antennas.

K400C* SO-239 base, 6.5' coax & PL-259
K400CNMO* NMO base, 6.5' coax & PL-259
K400N Type-N base, 13.5' coax & Type N

** Use C110 for front radio installments*

K540

Mirror/Luggage Rack Mount

Adjustable Mirror/Luggage rack mount accepts 1/2" to 7/8" tubing. Fits most mirrors and utility racks.

K540KM SO-239 base, 16.5' coax & PL-259
K540 Mount Only

C-SERIES CABLE ASSEMBLIES

C101

SO-239 base, 6.5' RG316 Teflon coax & PL-259. Ideal cable assembly for trunk mount/remote head installations.

C101NMO

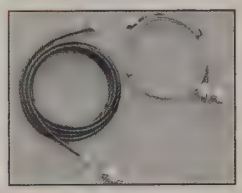
Same as C101 with NMO base. For Diamond's K-Series mounts only.

C110

Extension cable for C101. 10' RG8X coax w/mini UHF connectors. Use C110 to extend cable to 16.5' for most front radio installations.

C110BNC

10' assembly similar to above, uses RG316 Teflon coax terminating in BNC-male.



C211

SO-239 base, 16.5' cable assembly & PL-259. Combination of C101 & C110.

C213

Same as C101 with 13.5' cable assembly.

C213NMO

Same as C101NMO with 13.5' cable assembly.

K400-3/8 C

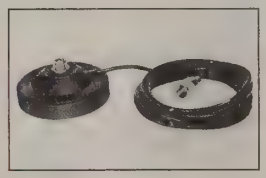
Special Trunk Mount for 3/8 x 24 Thread Antennas

Ideal mount for Outbacker Perth, OB Jr., and other medium weight antennas.

Note: Use C110, 10ft extension for front radio installation

Adjustment:	2 axis
Power:	350 watts RMS 500 w P.E.P.
Cable	6 1/2' RG316 Teflon coax w/PL-259

Spring recommended for stiff/heavy antennas



SPM35

Magnet Mount Base

Heavy duty 2.2 lb./4" magnet mount rated 25-500 MHz. Cable: 13' coax and PL-259. Recommended for antennas under 45".

SPM-NMO

Magnet Mount Base

Similar to the SPM35, but has NMO mount.

www.rfparts.com/diamond

Diamond Antenna Division of RF Parts Co. Tel: (760) 744-0900 • FAX: (760) 744-1943 • E-mail: rfp@rfparts.com

Dual Band Series

Larsen dual band antennas provide excellent performance for simultaneous use of VHF and UHF amateur frequencies. Each Larsen dual band antenna is factory preset to guarantee optimum performance with no tuning required.

NMO-2/70-SH $35.95
Freq: 144-148/440-450 MHz
Gain: Unity
Power: 100 Watts
Type: VHF: Center Loaded 1/4
UHF: Center Loaded 3/4
Base: NMOUHFBASEB w/spring
Height: 17"
Whip: WNMO2/70SH
Lower profile amateur 2m/70cm dual band antenna with spring for NMO mounts.

NMO-2/70B (black) $58.95
Freq: 144-148/440-450 MHz
Gain: 2.4/4dB
Power: 100 Watts
Type: VHF: 5/8 Wave
UHF: Collinear
Base: NMO2/70BCO
Height: 33.5"
Whip: W2/70B
Amateur 2m/70cm dual band antenna for NMO mounts. Available in chrome (below).

NMO-2/70C (chrome) $53.95
Freq: 144-148/440-450 MHz
Gain: Unity
Power: 100 Watts
Type: VHF: 5/8 Wave
UHF: Collinear
Base: NMO2/70BCO
Height: 36.75"
Whip: W2/70
Amateur 2m/70cm dual band antenna for NMO mounts. Available in black (above).

MM-2/70 ..... $44.95
Freq: 144-148/440-450 MHz
Gain: Unity
Power: 100 Watts
Type: VHF: Center Loaded 1/4
UHF: Center Loaded 3/4
Base: 3' Round Mag Mount
Height: 17"
Whip: WNMOQ2/70B
Complete 2m/70cm magnetic moung antenna with 12' of RG58A/U coax.

KD4-2/70 ..... $29.95
Freq: 144-148/442-448 MHz
Gain: Unity
Power: 25 Watts
Type: VHF: Loaded 1/4 Wave
UHF: 1/4 Wave
Conn: BNC
Height: 8"
Impedance matching transformer provides high Q and deeper resonance.

NMOQ-2/70-B (black) $32.95
Freq: 144-148/440-450 MHz
Gain: Unity
Power: 100 Watts
Type: VHF: Center Loaded 1/4
UHF: Center Loaded 3/4
Base: NMOUHFBASEB
Height: 18"
Whip: WNMOQ2/70B

Kulglass Series

Larsen's Kulglass™ (KG) series uses a patented low impedance design and advanced materials to produce the world's best on-glass antenna. The KG uses advanced resin polymer plastic to completely enclose the circuit board or loading coil for mechanical durability and weather resistance. 3M's best adhesive tape, plus Larsen's unique bonding enhancer ensure the best possible grip to the glass.

KG-2/70-CX-PL $99.95
Freq: 144-148/442-448 MHz
Gain: 2.4/4.5dB*
Power: 50 Watts
Type: VHF: 1/2 Wave
UHF: Collinear
Base: KG2/700/S
Height: 32.5"
*Ground plane required for gain
Glass mount dual band antenna for 2m/70cm amateur radio frequencies.

KG-144-UD-PL $73.95
Freq: 144-160 MHz
Gain: 2.4dB
Power: 100 Watts
Type: 1/2 Wave
Base: KG1440/S
Conn: PL-259
Height: 48"
Whip: WKG144
Complete KG glass mount antenna.

KG-220-UD-PL $74.95
Freq: 220-225 MHz
Gain: 2.4dB
Power: 100 Watts
Type: 1/2 Wave
Base: KG2200/S
Conn: PL-259
Height: 26.5"
Whip: WKG220
Complete KG glass mount antenna.

KG-440-UD-PL $61.95
Freq: 440-460 MHz
Gain: 2.4dB
Power: 100 Watts
Type: 1/2 Wave
Base: KG4400/S
Conn: PL-259
Height: 15"
Whip: WKG440
Complete KG UHF glass mount antenna with coax and connector.

Kulduckie Portable Series

Superior transmit range and tough mechanical durability are the hallmark of Larsen portables. All center cores are made of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver-plated components improve electrical efficiency. Double spring BNC's also reduce wear on the mount. Other mounting styles available.

KD4-146 ..... $18.95
Freq: 144-148 MHz
Gain: Unity
Power: 25 Watts
Type: 1/4 Wave Helical
Conn: BNC
Height: 8"

KD4-146-HQ (2m) $23.95
Freq: 144-148 MHz
Gain: Unity
Power: 25 Watts
Type: 1/4 Wave Helical
Conn: BNC
Height: 8"

KD-14-2M-HW $35.95
Freq: 144-148 MHz
Gain: Unity
Power: 25 Watts
Type: 1/2 Wave Telescoping
Conn: BNC
Height: 8.5 to 42"
Whip: WKD142MHW

NMO Mobile Antennas

Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials and construction to provide a premium mount. For demanding outdoor applications, the chemical resistant NMO series is housed in a resin polymer plastic shell which is completely molded around the nickel plated brass whip stud to eliminate moisture damage. Our superseal gasket also greatly reduces water intrusion under the base.

NMO-27C (chrome) $33.95
Freq: 27-31 MHz
Gain: Unity
Power: 200 Watts
Type: Loaded 1/4 Wave
Base: NMO27BCO
Height: 53"
Whip: W490

NMOQ-SPEC $11.95
Freq: 136-512 MHz
Gain: Unity
Power: 200 Watts
Type: 1/4 Wave
Height: 21"

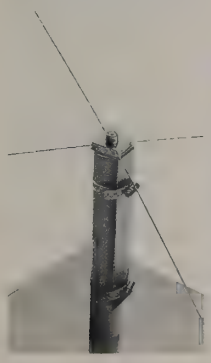
NMO-150C (chrome) $30.95
NMO-150B (black) $33.95
Freq: 144-174 MHz
Gain: 3dBd
Power: 200 Watts
Type: 5/8 Wave
Base: NMO150BCO
Height: 51.75"
Whip: W490

NMO-220C (chrome) $30.95
NMO-220B (black) $36.95
Freq: 220-225 MHz
Gain: Unity
Power: 200 Watts
Type: 5/8 Wave
Base: NMO220BCO
Height: 34.5"
Whip: W400

NMO-440C (chrome) $29.95
NMO-440B (black) $35.95
Freq: 440-460 MHz
Gain: 4.5dBd
Power: 200 Watts
Type: 5/8 over1/2 Wave
Base: NMOUHFBASEB
Height: 33""
Whip: W154

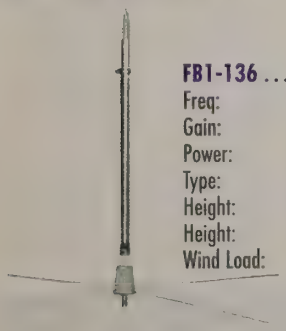
Base Station Antennas

Larsen manufactures a variety of small base station for directional and omni-directional applications. Each base station antenna is designed with premium materials to withstand the most demanding weather conditions. All base station antennas come with mounting hardware to attach to a pole up to 2" in diameter.



BSA-K $49.95
Freq: 144-512 MHz
VSWR: 1.5:1 or less
Power: 200 Watts
Conn: UHF Female
Whip: 51-3/4"

Complete base station kit for designing a base station unit from 144-512 MHz. Comes with mounting hardware.



FB1-136 ..... CLOSEOUT $69.95
Freq: 136-230 MHz
Gain: 3.6dB
Power: 200 Watts
Type: 5/8 over1/2 Wave
Height: 96"
Height: 33"
Wind Load: 100 mph

Mounts

Larsen has a full line of permanent and temporary mounts to solve nearly every installation problem. Each mount is manufactured of the highest quality materials, including premium coax.

NMO-K $13.95
Motorola style roof mount

Size: 3/4"
Coax: 17' RG-58A/U
Conn: PL-259

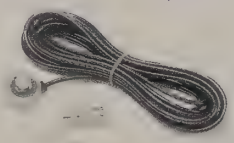
NMO-MM $30.95
Motorola style magnetic mount

Size: 3-1/2" x 3" Rectangle
Coax: 12' RG-58A/U
Conn: 58FCP
Pull Strength: 90 lbs.

NMO-TLP $27.95
Motorola style trunk gutter bracket, black

Size: 1-3/4" x 1-3/4"
Coax: 17' RG-58A/U
Conn: PL-259

PO-K $26.95
SO-239 female type roof mount



Size: 3/4" hole
Coax: 17' RG-58A/U
Conn: PL-259

PO-MM $33.95
SO-239 female type magnetic mount

Size: 3-1/2" x 3" Rectangle
Coax: 17' RG-58A/U
Conn: 58FCP
Pull Strength: 90 lbs.

TMB-34 ..... $4.95
TMB-34B (black) $7.95
Chrome trunk mounting bracket for NMO antenna.

Size: 1-5/8" x 1-5/8"
Mount: NMO

Visit us while *Surfing the Net*
www.larsenantennas.com

Parts and Accessories

W-490 ..... $9.95

Chrome .100 tapered replacement whip for 144 MHz. (49")

W-490B $12.95

Black .100 tapered replacement whip for 144 MHz. (49")

W-2/70B $24.95

Black .100 dia. replacement whip for NMO 2/70B (approx. 31")

Larsen Antenna Technologies

Larsen Antenna Technologies
3611 NE 112th Avenue
Vancouver, WA 98682
360 944-7551, Fax: 360 944-7556
Email: larsen@larsenantennas.com

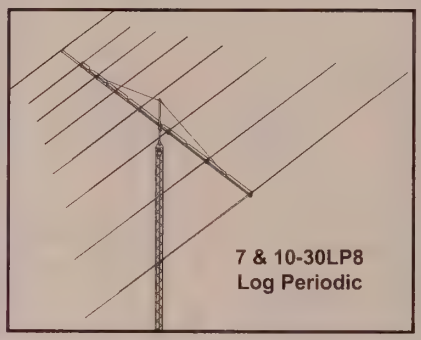
ANTENNAS

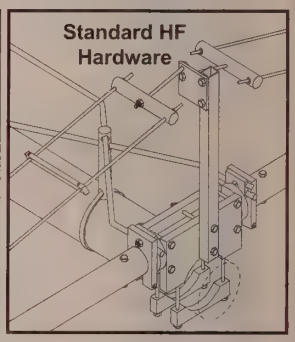
Positioners & Accessories

HIGH PERFORMANCE

HF ANTENNAS 3 TO 30 MHz

All M^2 HF Antennas use machined aluminum element to boom mounts and feature stainless steel hardware through the antenna. All antennas include a balun that is 5kW PEP rated. Log Periodics (our choice for multiband directional antennas) use a 4:1 broadband ferrite balun and the Monobanders all use a broadband teflon coax coaxial 1:1 balun (No ferrite). All antennas are carefully designed using computer modeling and optimization. Our Designer, Mike Staal (K6MYC) has been designing High Performance antennas commercially since 1971 when he formed KLM. Our antennas feature the highest gain possbile, consistant with other important parameters like F/B & VSWR bandwidth. Some of our larger antennas are sold Factory Direct and are listed at the back of the catalog.



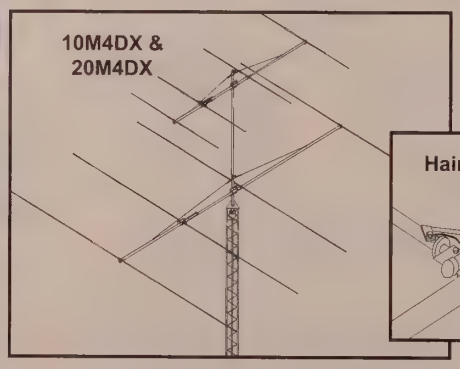


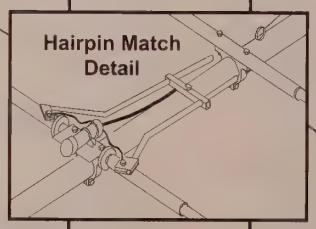
MODEL	7 & 10-30LP8	10-30LP8	17-30LP7DX	40M1LDX	20M4DX	17M5DX	17M3DX	15M4DX	12M4DX	10M4DX
Freq. MHz	7 & 10-30	10-30	17-30	6.9-10	14.0-14.350	18.08-18.18	18-18.3	21.0-21.450	24.89-24.99	28-29
Gain	6 dBd	6 dBd	6.5 dBd	NA	7.4 dBd	8.6 dBd	6.3 dBd	8.5 dBd	8.6 dBd	8.7 dBd
Front-Back	3 db/15 dB	15 dB	20 dB	NA	24 dB	24 dB	25 dB	25 dB	20 dB	25 dB
Beamwidth	E=65	E=65	E=65	E=70	E=50/H=75	E=48/H=75	E=60/H=90	E=53/H=60	E=48/H=58	E=53/H=60
VSWR	1.5:1 Typ.	1.5:1 Typ.	1.5:1 Typ.	1.2:1 Typ.	1.2:1 Res.	1.2:1 Typ.	1:2:1 Max.	1.2:1 Max.	1.2:1 Typ.	1.4:1 Max.
Boom Length/Dia.	29' 7" / 3"	29' 7" / 3"	23' 8" / 2"	3"	34' / 2 1/2"	36' / 2.5"	18' / 2"	33'8"/2.5-2	27' / 2"	23' / 2"
Element Max	46'	46'	28' 8"	46'	35'	27' 10"	27' 10"	23' 8"	20' 5"	17' 4"
Turn Radius	28'	28'	19'	23'	25'	24' 5"	16' 6"	21'	16' 8"	14'
Wind Area	13 Sq Ft.	12.5 Sq Ft.	6.5 Sq Ft.	3 Sq Ft.	6.9 Sq Ft.	7.25 Sq Ft.	4 Sq Ft.	6.1 Sq Ft.	4.4 Sq Ft.	3.7 Sq Ft.
Wind Survival	100 MPH	100 MPH	100 MPH	100 MPH	85 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	86 lbs/TRK	83 lbs/TRK	45 lbs/UPS	55 lbs/UPS	35 lbs/UPS	38 lbs/UPS	30 lbs/UPS	32 lbs/UPS	28 lbs/UPS	23 lbs/UPS

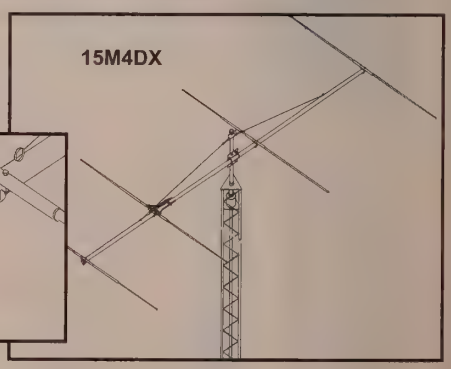
OR2800P AZ ROTATOR

World Class Azimuth Rotator, built for the serious Ham in mind ! This Monster will turn up to 35 Sq. Feet of wind area with ease. Control Head has 10 Programmable presets and RS232 Computer interface.

SEE PAGE 5 FOR MORE DETAILS.

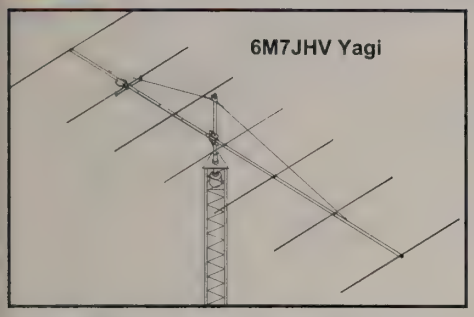




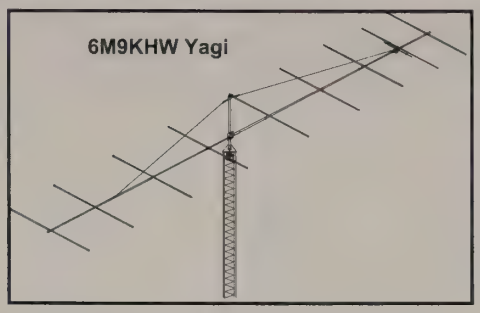


6 Meter Antennas

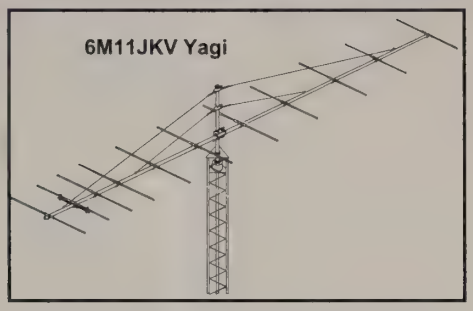
M2 Owns 6 Meters !



The 6M7JHV is a mid-sized 7 element antenna designed originally for Dave Batcho, **N5JHV**. The JHV's excellent gain is coupled with a very clean pattern for reducing local noise, making it ideal for long-haul terrestrial and EME communications. An outstanding performer by itself, the JHV also produces 17 dBd in a 4-bay array.



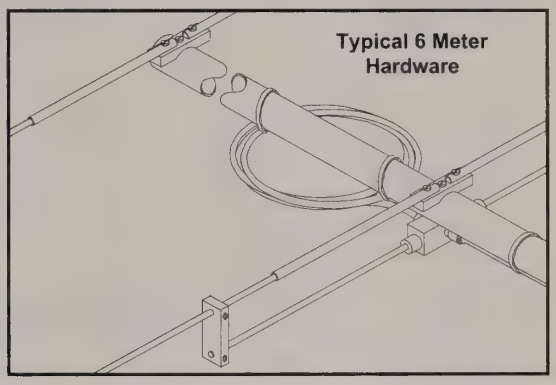
The 6M9KHW is a full size 9 element antenna designed for Ray Grenier, **K9KHW**. We employed the latest computer optimization to achieve the most gain possible with the fewest elements. The pattern is clean & windload is low. Best of all its Ups-able to save you money. We have designed the 6M9KHW to fill the shoes of the world famous 6M2.5WL.



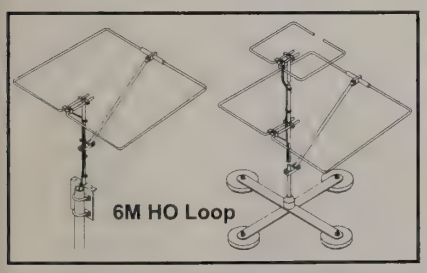
This premier yagi was produced for Jim Treybig, **W6JKV** for use on his new 60 acre ranch outside Austin Texas. This rugged performer is unmatched in the industry and clearly is the king of the 6 meter band. The free space gain is 14 dBd and when horizon ground gain of 5+dB is added in, moon echoes are not only possible but probable with 400 watts of power.

The world is changing and M2 is right there in the game. To offset the rising freight costs, we are designing our large,high performance antennas for shipment by UPS. This means lower costs to you with less damage potential. We are also streamlining our designs, reducing weight while still maintaining our 100 MPH survival ratings.

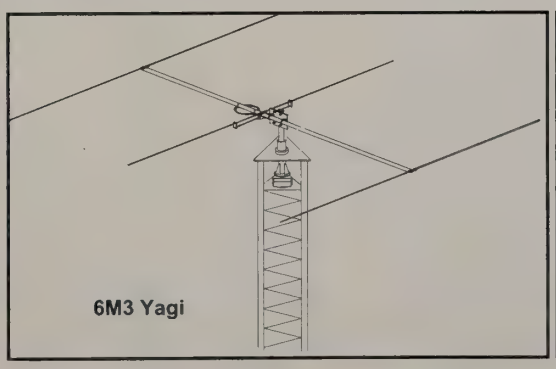
We know only to well how increased antenna restrictions limit your system performance. We have continued to look for better ways to get more for less and our H.O. Loop series is a prime example of great performance in a small package. We listen to your needs and we accommodate whenever possible !

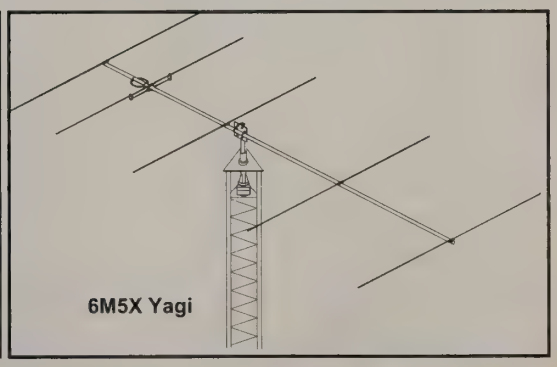


MODEL	6M Ho Loop	6M3	6M5X	6M7	6M7JHV	6M2WLC	6M9KHW	6M11JKV
Freq. MHz	50-50.3	50-50.6 or 51-54	50-50.5 or 51-54	49.5-50.5	50-50.4	49.7-50.5	50.0-50.4	50-50.4
Gain	4.4 dBd	6.4 dBd	9.4 dBd	10.5 dBd	10.9 dBd	11.9 dBd	12.7 dBd	14.0 dBd
Front-Back	NA	20 dB	21 dB	23 dB	25 dB	25 dB	23 dB	20 dB
Beamwidth	Omni / Horz Pol	E=65 / H=80	E=42 / H=52	E=42 / H=50	E=40 / H=42	E=36 / H=39	E=34 / H=39	E=26 / H=30
VSWR	1.2:1 Typ.	1.1 @ 50.175	1.1 @ 50.175	1.2:1 @ 50.1	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.
Boom Length/Dia.	Size 29.5" Sq.	6' 9" / 1 1/2"	18' / 1 1/2"	26' 9" / 2"	30' 8" / 1 1/2"	39' 6" / 2 & 2 1/2"	49'4"/2"-1/2"	69' / 3"
Elements	1 (loop)	3	5	7	7	9	9	11
Wind Area	.01 Sq Ft.	1.2 Sq Ft.	2.2 Sq Ft.	3 Sq Ft.	2.5 Sq Ft.	5 Sq Ft.	5.9 Sq Ft.	10.7 Sq Ft.
Wind Survival	100 MPH	100 MPH	100 MPH	100 MPH	85 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	2 lbs / UPS	6 lbs / UPS	9 lbs / UPS	20 lbs / UPS	17 lbs/ UPS	31 lbs / TRK	35 lbs / UPS	83 lbs / TRK



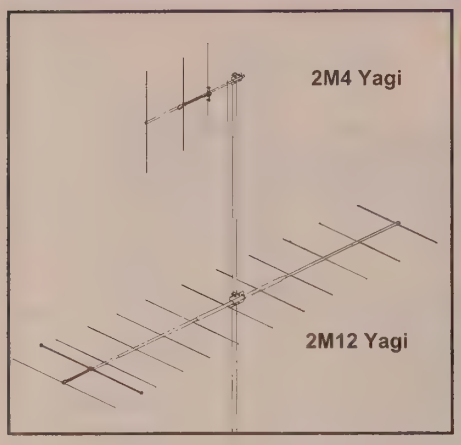
The New 6M HO Loop is an omnidirectionally, horizontally polarized antenna perfect for any mobile or base station. 200 mile contacts are not uncommon for this reduced size loop.



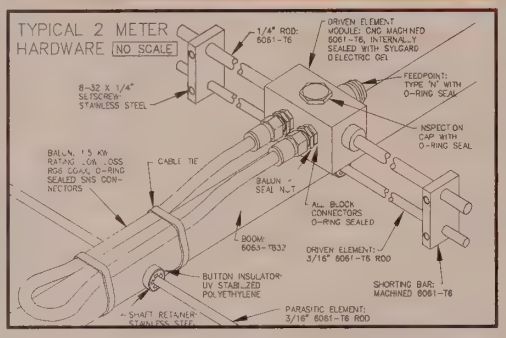


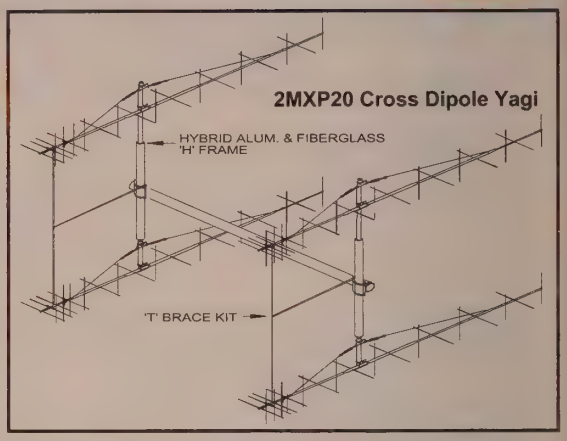
CALL US ANY TIME BETWEEN 8:00AM-4:00PM PST (559) 432-8873

2 Meter Antennas



NEW TECHNOLOGY

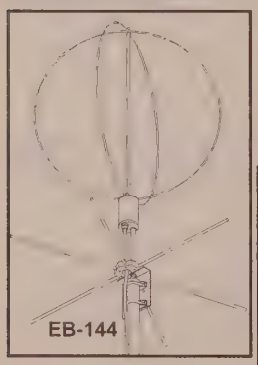




We've combined the best new computer optimization programs and decades of VHF antenna design experience to maximize the performance of every 2 meter yagi. Gain, beamwidth and F/B are tailored, model by model, to enhance your applications. The heart of these antennas is the unique driven element module shown above. Originally designed for maritime ATS satellite systems, it proved so successful at matching, power handling and weather resistance that it is now in use on all our 2 meter yagis.

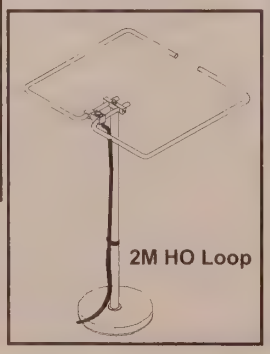
The pictures should tell you about our rugged, water proof designs. We continue to offer our popular standards like the 2M5WL. At the same time we push the state of the art with antennas like the versatile 2MXP20 building block. Polarity diversity is the wave of the future for EME but it also can be a great advantage for satellite and terrestrial communications. Throughout our line we strive to be "Leading Edge."

MODEL	2M4	2M7	2M9FM	2M9SSB	2M12	2M5WL	2M18XXX	2M8WLHD	2M5-440XP
Freq. MHz	144-148	144-148	145-148	144-146	144-148	144-148	144-146	144-144.7	2M & 440
Gain	7.5 dBd	10.3 dBd	12.0 dBd	12.0 dBd	12.8 dBd	14.8 dBd	15.3 dBd	17.0 dBd	9 / 12 dBd
Front-Back	20 dB	20 dB	24 dB	24 dB	25 dB	22 dB	22 dB	24 dB	12/25 dB
Beamwidth	E=54 / H=74	E=46 / H=54	E=35 / H=40	E=35 / H=40	E=32 / H=36	E=26 / H=29	E=25 / H=29	E=20 / H=21	Cross Pol.
VSWR	1.5:1 Max.	1.3:1 Typ.	1.4:1 Max.	1.4:1 Max.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.3:1 Max.
Boom Length/Dia.	4' / 1"	8' 10" / 1"	14'6" / 1"-3/4"	14'6" / 1"-3/4"	19'6" / 1 1/2"	33'/ 1-1/2"-3/4"	36'3"/1-1/2"-3/4"	55'/ 2.5"-1.5"	5'8" / 1"
Elements/T.Radius	4 / 4'	7 / 4' 6"	9 / 8'	9 / 8'	12 / 10' 6"	17 / 18' 9"	18 / 19' 6"	21 / 29'	5 / 10
Wind Area	.5 Sq Ft.	.74 Sq Ft.	1.2 Sq Ft.	1.2 Sq Ft.	1.5 Sq Ft.	2.7 Sq Ft.	2.9 Sq Ft.	5.5 Sq Ft.	1.0 Sq ft.
Wind Survival	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	3 lbs / UPS	4 lbs / UPS	6 lbs / UPS	6 lbs / UPS	8 lbs / UPS	12 lbs / UPS	14 lbs / UPS	38 lbs / UPS	4 lbs / UPS



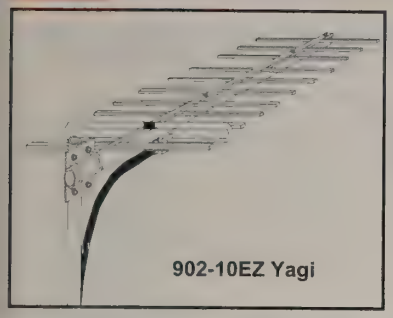
The EB-144 (Eggbeater) offers smooth omnidirectional horizontal polarity at the horizon. Perfect for Satellite or SSB.

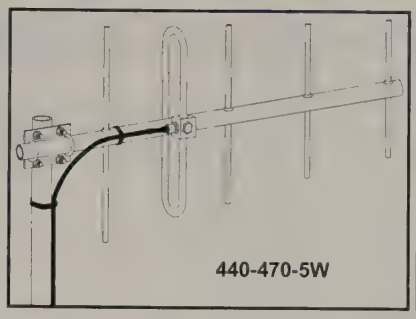
The New HO Loop from M2 provides an omnidirectional, horizontally polarized signal ideal for mobile and base operations. Size - 11.25" square.



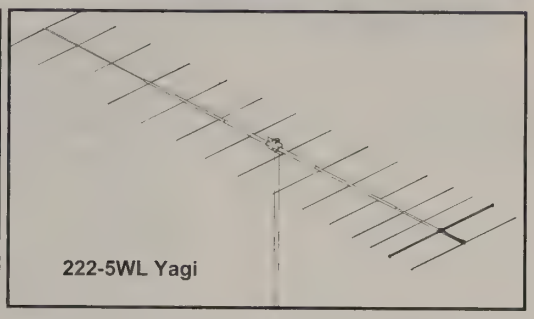
MODEL	2MXP20	2MCP14	2MCP22	2M Ho Loop	EB-144
Freq. MHz	144-146	143-148	143-148	144-144.5	135-150
Gain	13.3 dBd	10.3 dBdc	12.5 dBdc	4.86 dBd	6 db Hor/RHC
Front-Back	20 dB Typ.	20 dB Typ.	25 dB Typ.	NA	NA
Beamwidth/Polarity	Cross Pol.	Circular Pol.	Circular Pol.	Omni, Hor.	Omni, Hor/RHC
VSWR	1.2:1 Typ.	1.3:1 Typ.	1.4:1 Typ.	1.2:1 Typ.	1.5:1 Max.
Boom Length/Dia.	21'6"/1-1/2-1"	10' 6"/ 1"	18'6"/1-1/2-1"	NA	NA
Elements/T.Radius	14H/14V / 12'2"	7H/7V / 6'4"	11H/11V / 10'	1 loop/11.25"	2 loops/34"Hx28"W
Wind Area	1.9 Sq Ft.	1.1 Sq Ft.	2.5 Sq Ft.	.05 Sq Ft.	.07 Sq Ft.
Wind Survival	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	6 lbs / UPS	6 lbs / UPS	12 lbs / UPS	1 lbs / UPS	2 lbs / UPS

222MHz, 70CM, 902MHz, 23CM


902-10EZ Yagi


440-470-5W

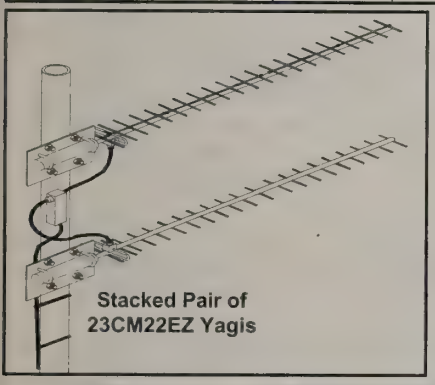
222 HO Loop

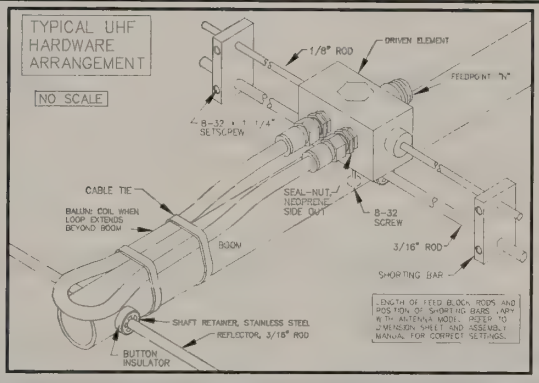

222-5WL Yagi

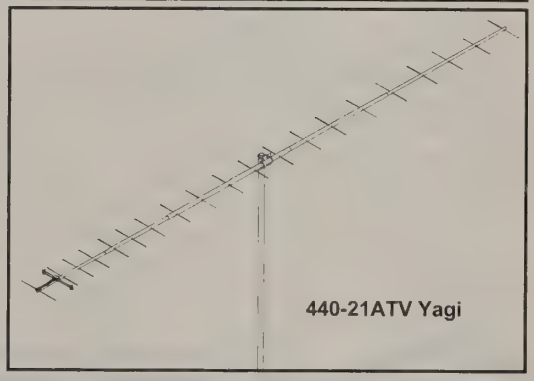
We have always offered performance and we have held that standard as our line grew. We continue to expand our line with innovative, longer lasting, trouble free antennas. In some models we bridge from amateur to commercial notably with our 440-470-5W (welded) and 902-6W (welded). You have to look long and hard to find this much high performance variety...check it out !

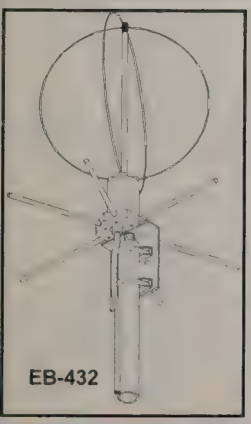
All of our UHF yagis feature balun and feed connectors that are O-ring sealed to a CNC machine block. Internal connections are encapsulated in a space-age silicone gel with nearly 4 times the dielectric strength of air. The type "N" connector features a beryllium copper, gold-plated center pin.

MODEL	222-7EZ	222-10EZ	222-5WL	222-7WL	222 HO Loop	440-470-5W	420-450-11	440-18	440-21ATV	432-9WL	432-13WLA
Freq. MHz	220-226	222-226	222-226	222-226	220-224	440-470	420-450	420-453	420-440	420-440	430-434
Gain	9.8 dBd	12 dBd	15.2 dBd	16.4 dBd	4.75 dBd	7.8 dBd	11.3 dBd	14.5 dBd	15.9 dBd	17.3 dBd	18.6 dBd
Front-Back	22 dB	23 dB	21 dB	25 dB	NA	20 dB	20 dB	23 dB	23 dB	24 dB	22 dB
Beamwidth	E=46/H=52	E=34/H=39	E=26/H=28	E=24/H=26	OMNI	E=56/H=72	E=34/H=43	E=27/H=24	E=22/H=24	E=20/H=22	E=16/H=18
VSWR	1.5:1 Max.	1.2:1 Max.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Max.
Boom Lgth/Dia	5'8" / 1"	9'9" / 1"	23'3" / 1.5-1"	32'5" / 1-1/2-1"	NA	2'2" / 1-1/4"	5' / 1"	11'4" / 1"	14'6" /1-3/4"	21'/1-1/2-1"	30'8"/1.5-1
Elements	7	10	15	23	2 (loops)	5	11	18	21	28	38
Wind Area	.5 Sq Ft.	.9 Sq Ft.	1.5 Sq Ft.	2.7 Sq Ft.	.01 Sq Ft.	.33 Sq Ft.	.58 Sq Ft.	.88 Sq Ft.	1.25 Sq Ft.	1.6 Sq Ft.	2.5 Sq Ft.
Wind Survival	100 MPH	100 MPH	100 MPH	75 MPH	100 MPH	150 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	3 lbs / UPS	4 lbs / UPS	9 lbs / UPS	11 lbs / UPS	1 lbs / UPS	3 lbs / UPS	4 lbs / UPS	5 lbs / UPS	5 lbs / UPS	8 lbs / UPS	10 lbs / UPS


Stacked Pair of 23CM22EZ Yagis




440-21ATV Yagi

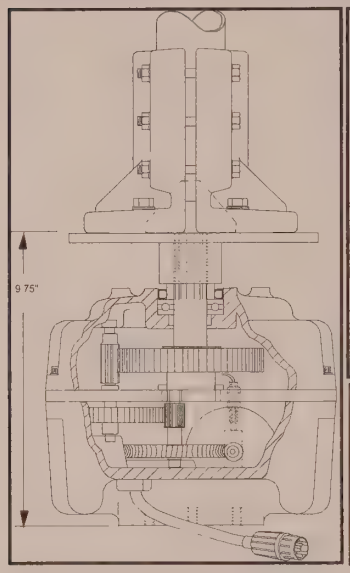

EB-432

MODEL	EB-432	436CP30	436CP42UG	432 HO Loop	902-6W	902-10EZ	902-18EZ	23CM22EZ	23CM35
Freq. MHz	420-450	430-440	430-438	430-436	900-930	900-928	900-928	1250-1300	1250-1300
Gain	4 dBv	14.5 dBdc	16.8 dBdc	5 dBd	10 dBd	12.6 dBd	14.8 dBd	16.0 dBd	18.4 dBd
Front-Back	<1 dB	22 dB	25 dB	NA	20 dB	23 dB	25 dB	26 dB	28 dB
Beamwidth	OMNI,hor/cir	30 Circular	21 Circular	OMNI,HOR	E=44/H=54	E=35/H=38	E=27/H=30	E=24	E=17/H=18
VSWR	1.5:1 Max.	1.4:1 Max.	1.5:1 Max.	1.2:1 Typ.	1.2:1 Max.	1.2:1 Max.	1.2:1 Max	1:1	1.2:1 Typ.
Boom Length	9.5" Dia.	9' 9"	18' 10"	4 3/8" Square	2' / 3/4"	3'5" / 1"	5'4" / 1"	5'2" / 1/2"	10' / 1"
Elements	2 (loops)	30	42	1 (loop)	6	10	18	22	35
Wind Area	Min.	1.0 Sq Ft.	2.0 Sq Ft.	.015 Sq Ft.	.15 Sq Ft.	.30 Sq Ft.	.36 Sq Ft.	.3 Sq Ft.	.6 Sq Ft.
Wind Survival	100 MPH	75 MPH	100 MPH	150 MPH	150 MPH	100 MPH	100 MPH	100 MPH	100 MPH
Weight/Ship	2 lbs / UPS	5 lbs / UPS	8 lbs / UPS	1 lbs / UPS	3 lbs / UPS	3 lbs / UPS	4 lbs / UPS	2 lbs / UPS	4 lbs / UPS

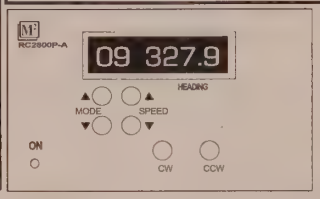
M2 CAN PROVIDE YOU OR YOUR COMPANY WITH COMPLETE TURNKEY PACKAGES

Positioners & Accessories

OR2800DC AZ POSITIONER



Wind Area Capacity	35 sq. ft.
Starting Torque	3500 in./lbs.
Rotating Torque	2800 in./lbs.
Braking Torque	17000 in./lbs.
VerticalLoadCapacity	1800 lbs.
Height of Rotator only	9.75"
Total Height	15.75"
Mast Size (O.D.)	1.75-3"
Rotation Speed, max.	50-270 sec.
Rotation Range	0-360° ±14°
Display / Travel Res	0.1° / .5°
Input Voltage	110 / 220 AC
Motor voltage	28 - 42 VDC
Cable requirements	2-#18, 2-#22
Weight (rotator unit)	42 lbs.



MADE IN U.S.A.

Powerful and reliable, the OR-2800DC rotates multiple HF antennas or large UHF/VHF arrays with ease. Features include:

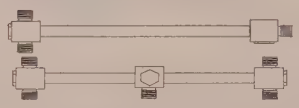
1. Precision worm-gear drive, not reversible by mast torque
2. Non-slip, ductile iron mast clamps
3. Large drive plate for masts up to 3"
4. Heat-treated steel gear train, hardened driveshaft
5. Prop-pitch style torque plate
6. Fits inside towers like Rohn 25 (top only) and 45, Triex LM-354, and U.S. Towers TX438
7. Motor-mounted digital pulse switch for accurate, closed loop control and heading Display.

CONTROL UNITS

RC2800PDC Programmable Control Unit
Manual features plus heading preset, 10 Programmable presets, programmable ramped start / stop, 1/2 degree target accuracy. It has a RS232 port for complete computer control, tracking programs, etc.

RC2800PP Programmable Control Unit
The same features as above, but designed to work with a Prop-pitch motor. More power right out of the box . If you can't turn it with a rotator, turn it with our controller and a Prop-pitch.

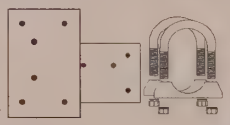
POWER DIVIDERS, CABLES AND HARDWARE



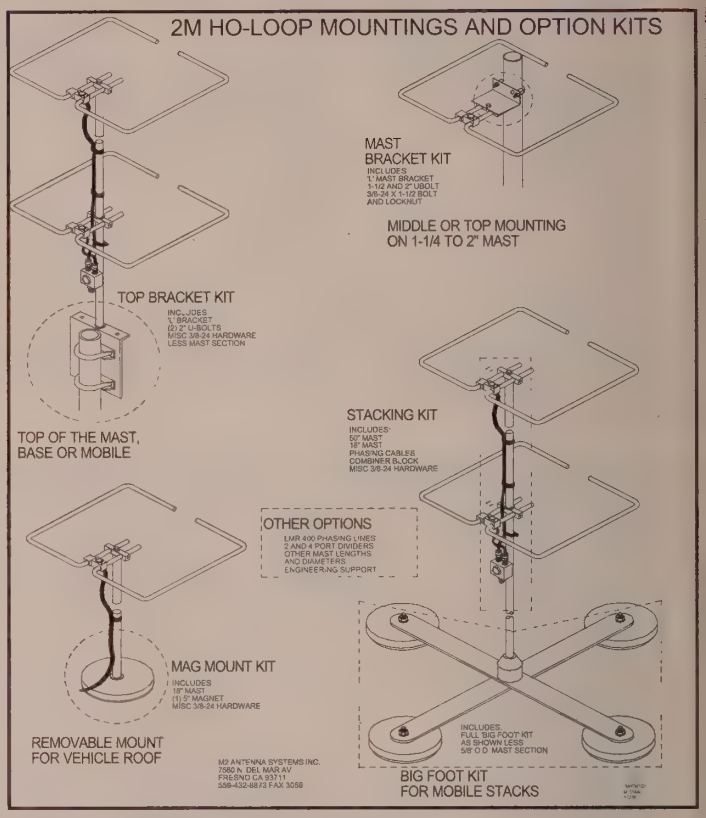
Power Dividers-We build 2 port and 4 port units for most frequencies. They are ideal for accurate impedance matching when feeding two or more antennas with 50 Ohm cable. All units are built with "N" female connectors threaded into the blocks and seated on O-ring seals.

Phasing Cables-Are electronically phased and matched at our factory to ensure accuracy. Reliability is increased with the use of LMR-400 coax and silver-plated connectors. Connectors are shrink-sleeved and crimp sealed to coax.

Special Hardware- U-bolts, plates and other special assorted hardware are now available. Special blank plates or standard plates are available for most of our VHF and UHF line of antennas. The **HD Fiberglass boom kit** is a strong non-conductive crossboom unit consisting of two 2" O.D. x 1/4" wall x 60" fiberglass tubes, a 1-1/2" solid aluminum center rod (for mounting through elevation units) and stainless steel hardware. Total length is 11 ft. Ideal for uplink/downlink circular polarized antennas or other applications where a non-interactive crossboom is required.



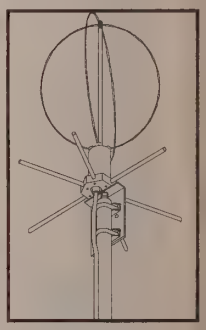
HD Fiberglass • • Boom Kit



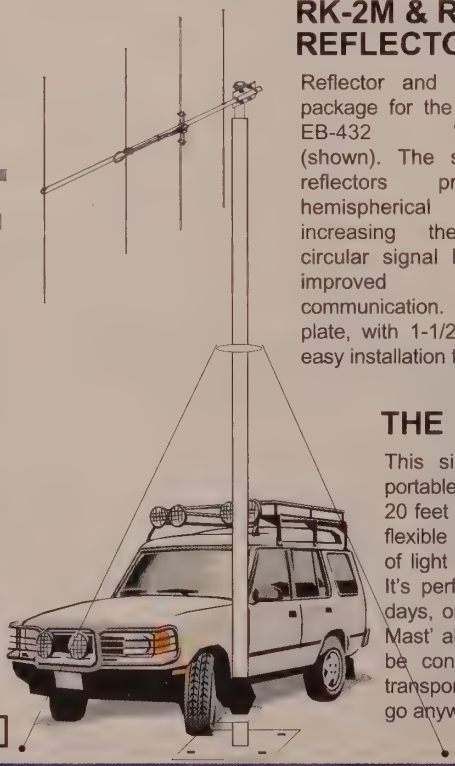
HO LOOP RELATED PARTS

Specialized Hardware - The M2 HO Loop was originally designed for mobile use only. But because of the great response to these extraordinary antennas, we have engineered several different ways that they can be mounted. We can provide mounting brackets, mast sections and magnetic mounts for most conceivable mounting arrangements.

RK-2M & RK-70CM REFLECTOR KITS



Reflector and base mount package for the EB-144 and EB-432 "Eggbeaters" (shown). The six 1/4" rod reflectors produce a hemispherical pattern, increasing the overhead circular signal by 6 dB for improved satellite communication. A mounting plate, with 1-1/2" and 2" U-bolts, is supplied for easy installation to mast tops / sides or sidewalls.



THE FAST MAST

This simple, light weight, economical, portable antenna mast, can be extended to 20 feet in twenty minutes or less. It has a flexible mounting arrangement for the use of light duty rotator, for a rotatable mast. It's perfect for Mountain topping or field days, or remote contest sights. The Fast Mast' aluminum telescoping sections can be conveniently packaged for ease of transportation. You'll agree, that you can't go anywhere without it !

CALL US ANYTIME BETWEEN 8:00AM-4:00PM PST (559) 432-8873

Specials & Customs - Factory Direct Items

Standard Big Yagis... 80 Meters - 10 Meters

MODEL	80M1	80M2	80M3	40M2L	40M3L	40M4L	20M5	20M6	15M6	10M7
Freq. MHz	3.5-3.575 & 3.75-3.85	3.5-3.575 & 3.75-3.85	3.5-3.575 & 3.75-3.825	7.0-7-3 X 125 KHz	7.0-7.3 X 200 KHz	7.0-7.3	14.0-14.350 LF,CW,FF	14.0-14.350 FULL BAND	21.0-21.450	28.0-28.75
Gain	-.022 dBd	4.0 dBd	5.3 dBd	4.2 dBd	5.6 dBd	6.2 dBd	8.1-8.5 dBd	9.0 dBd	9.4 dBd	10.3 dBd
Front-Back	0 dB	12 dB	20 dB	12 dB	20 dB	22 dB	24 dB	25 dB	25 dB	25 dB
Beamwidth	E=75	E=66	E=65	E=85	E=62	E=60	E=50	E=46	E=48/H=53	E=46/H=56
VSWR	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1.2:1 Typ.	1:1 RES	1.2:1 Typ.	1.2:1 Typ.	1.4:1 Max.
Boom Length/Dia.	85' / 3"-3/4"	30' / 4"	58' / 4-12"-4"	20' / 3"	30' / 3"	42' / 3"	44' / 3"	60' / 3"	44'10"/2.5-2"	45'/2.5-2"
Element./T.Rad	1 / 47'	2 / 46'	3 / 52'	46' / 25'	46' / 28'	46' / 32'	36' / 30'	37' / 40'	23'8" / 27'	17'6" / 26'
Wind Area	8 Sq Ft.	19 Sq Ft.	30.5 Sq Ft.	6.5 Sq Ft.	9.5 Sq Ft.	13 Sq Ft.	10.5 Sq Ft.	14.8 Sq Ft.	8.5 Sq Ft.	7.4 Sq Ft.
Wind Survival	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	100 MPH	90 MPH
Weight/Ship	85 lbs/TRK	200 lbs/TRK	350 lbs/TRK	55 lbs/TRK	90 lbs/TRK	115 lbs/TRK	105 lbs/TRK	150 lbs/TRK	50 lbs/TRK	49 lbs/TRK

Survivors Series - 125MPH

Are High winds or ice keeping you from putting up a new antenna ? Or is keeping one up the problem ? The solution: M2's new line of ruggedized HF antennas, wind rated for 125 MPH ! We call them the **"Survivor Series"** - Nearly 20 models, including multi-band log-periodics and computer optimized monobanders like the 20M5 or the Full Size 40M3FS.

All wind survival rated to 125 MPH, all designed to match your HF ambitions... and your weather ! The **"Survivor Series"** features reinforced booms and double wall, triple wall, or fiberglass rod reinforced element joints, all optimized for strength using the latest computer software. Hefty 1/2" thick aluminum element-mounting plates, stainless hardware, and high-power baluns insure top performance and survivability, regardless of the weather.

Why let extreme weather come between you and your HF ambitions ? The **"Survivor Series"** are here now ! We are M2-ready to get extreme on your tower and feedline !

Custom Systems, H-Frames and Monster Antennas

We provide Custom Systems from basic boom-tilt fixtures to complete Tower Pedestal systems for satellite tracking. We work with customers like NASA, NOAA, SRI, Lockheed Martin and McDonald Douglas to provide unique solutions to suite their needs. Your special needs are what we consider a challenge to our production facility. We are geared to handle single piece, to high volume production. Whether you need a portable unit in the field or a complete tower pedestal capable of tracking LEO satellites to the International Space Station, we are confident that we can help you.

Company Profile, History and Goal

M2 is a woman owned, family run business with old time values. We enjoy our work and the time we spend designing and building products and finding solutions to your requirements. We are deep in both practical "Real World" experience as well as "Technical Expertise." We have been in the antenna business for 28 years with thousands of designs in our files. Our Goal is to produce the best, highest performance products possible within cost and time limits. We strive for your satisfaction in our product. We're really pleased when you are happy !

M2 Website

Have questions ? Visit our Website at **www.m2inc.com**

There you will find a complete listing of our Antennas, Positioners and Accessories. Not to mention **MPact News**, were you can get the latest and up to date info about M2 and new products. Check your knowledge with **MTech** technical notes from our resident antenna Guru Mike Staal-K6MYC. And for the curious minded, check out the **M2 Photo Gallery** were you can catch a glimpse of our latest commercial projects in house. The **M2 Bulletin Board** is available to those of you who are looking for specific items, or would just like to drop a good piece of info you feel would benefit other customers.Sign on... and check us out !

VHF and UHF Fixed Station Vertical Antennas

Model G6-270R
Dual band Base Antenna
For 2 Meter and 440 MHz

Created from the same design as the G7 and the G6 Series. It has rugged and solid fiberglass construction, with optimum gain and wide bandwidth. Consists of 5/8 λ over 5.8 λ on 2M and 4 x 5/8 λ on 440 MHz.

ELECTRICAL
- Maximum power: 100 Watts
- Gain: 6 dB VHF & UHF
- Bandwidth: 1.5:1 SWR
  2 MHz – 2 Meters
  10 MHz – 440 MHz
- Feed: Shunt, DC ground
- Connector: N female

MECHANICAL
- Length: 7 ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph
- Mounting: Vertical support 1.25" – 1.5" mast

Model G6-144B
Two Meter Antenna
Omni Directional
Fixed Station

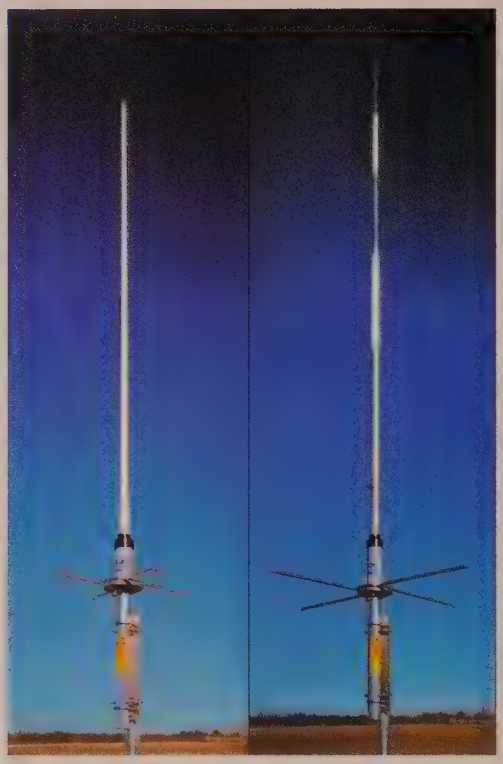
6 dB gain compared to ½ wave dipole

Get the tremendous advantage of 6 dB gain transmitting, and 6 dB gain receiving. Whether your application is for an individual fixed station or a repeater operation, the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wavelength radiators correctly phased in a collinear configuration. The stated gain figure is conservative and the maximum signal radiation is at an extremely low angle.

ELECTRICAL
- Gain: 6 dB over ½ wave dipole.
- Omni directional radiation pattern
- Maximum radiation at an extremely low angle
- 50 ohm feed impedance
- Field adjustable: 140-150 MHz

MECHANICAL
- Length: 9 ft. 9 in., from 1.125" telescopic to 0.375".
- Weight: 6.8 lbs.
- Wind load: 26 lbs. @ 100 mph.
- Mounting: Vertical support up to 1.75" O.D.

See the full line of Hustler Antennas at our new Web Site!
www.new-tronics.com



G6-270R **G7-144**

Model G7-144
Two Meter Antenna
Omni Directional
Fixed Station

7 dB gain compared to ½ wave dipole.

ELECTRICAL
- Maximum power: 600 watts.
- Gain: 7 dB over ½ wave dipole.
- Bandwidth: 4 MHz. Under 2:1 VSWR
- Impedance: 50 ohm feed
- VSWR 1.2:1 at resonance
- Tuning range: 144-148 MHz.
- Feed: Shunt, DC ground.
- Radiator: Collinear shunt fed. Triple 5/8 wave elements in series, separated by 2 phasing coils to produce maximum gain and extremely low angle of radiation.
- Omni directional radiation pattern.

MECHANICAL
- Length: 15 ft. 4 in.
- Weight: 10 lbs.
- Radials: (4) 20.25" x 0.375" O.D.
- Connector: N type.
- Wind load: 26 lbs. @ 100 mph.
- Mounting: Vertical support up to 1.75" O.D.
- Completely self supporting.
- High strength fiberglass and aluminum.

Model G6-440
Omni Directional
Fixed Station

Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

ELECTRICAL
- Maximum power: 250 watts
- Gain: 6 dB
- Bandwidth: 8 MHz. Under 1.5:1 SWR
- Impedance: 50 ohm nominal
- Lightning protection: direct ground
- Termination: Type N female

MECHANICAL
- Length: 7 ft. 3 in.
- Weight: 5 lbs.
- Wind survival: 125 mph
- Mounting: Vertical support up to 2.0" O.D.

Model G7-220
Omni Directional
Fixed Station

7 dB gain compared to ½ wave dipole.

This rugged antenna means exceptional 220 MHz (1.25 Meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle of maximum radiation efficiency.

ELECTRICAL
- Maximum power: 600 watts
- SWR resonance 1.2:1 at the antenna
- Impedance: 50 ohms

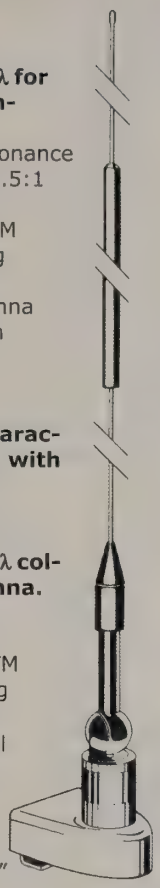
MECHANICAL
- Length: 10 ft. 2 in.
- Weight: 7 lbs.
- Radials: (4) 14.75" x 0.1875" O.D.
- Connector: Type N
- Wind load: 26 lbs. @ 100 mph
- Mounting: Vertical support up to 1.75" O.D.

Reliability & Performance... Beyond your Expectations!

New-Tronics Antenna Corporation
One New-Tronics Place
Mineral Wells, Texas 76067-9563
Phone: **940.325.1386**
Toll Free: **877.994.9499**
Fax: 940.328.1409

VHF and UHF Mobile Antennas

Collinear



Model CGT-220
5.2 dB Gain 5/8 λ over 1/4 λ for collinear Trunk lip mount antenna.

- 1.1:1 SWR (typical) at resonance
- 4 MHz. Bandwidth under 1.5:1 SWR
- Power Rating: 200 watts FM
- Height: 4 ft. 9 in. including mount
- Spin knob to remove antenna
- 17 ft. of low loss coax with connector

Model CG-220
This model has identical characteristics at the CGT-220 but with a 3/8 x 24 threaded base.

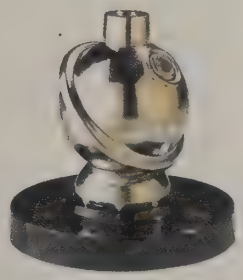
Model CGT-144
5.2 dB Gain, 5/8 λ over 1/4 λ collinear trunk lip mount antenna.

- 6 MHz bandwidth
- 1.5:1 SWR
- Power rating: 200 watts FM
- Length: 7 ft. 1 in. including mount
- 180° swivel ball for vertical positioning
- 17 ft. coax with connector
- No drilling required

Model CG-144
Same as CGT-144 but has 3/8" x 24 threaded base.

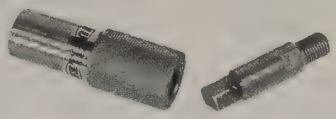
Stainless Steel Mounts

- Exceptional performance and quality
- 180° adjustable reinforced stainless steel ball.
- Professional quality Cycolac base for greatest mechanical stability
- Exclusive "C" backup plate allows external installation
- Supplied with all mounting hardware and cork pad
- Applicable with all Hustler and other 3/8" x 24 thread.



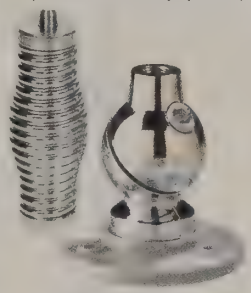
SSM-1 Professional Ball Mount and Spring.
SSM-2 Ball mount.
SSM-3 Stainless Steel Spring with Coupling Stud.

Quick Disconnect
Model QD-2
100% Stainless Steel. Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100%



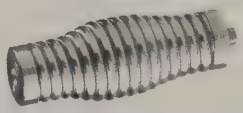
stainless steel. Special design of enclosed compression and lock assembly assures freedom against ice and dirt jam up. Accommodates small, medium and large mobile antennas. Equipped with 3/8" x 24 threads, female on one end and male on the other.

Professional Series Heavy Chrome
Model C-32
Hustler professional ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware, and a hex wrench.



Model C-29
Stainless steel, corrosion resistant and electroplated spring complete with 3/8" x 24 coupling stud.

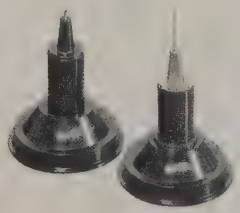
Model C-30
Chrome plated steel spring complete with 3/8" x 24 coupling stud.



MX Series NMO Magnetic Mount Antenna

- 3.4 dB gain
- Power rating: 200 watts
- NMO style magnetic mount.

NEW!

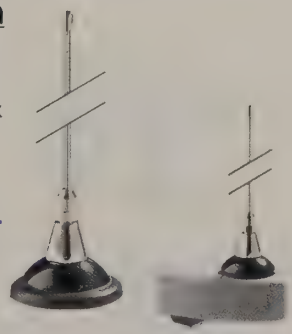


Model MX-2
2 meter, black and chrome
Model MX-2B
2 meter, all black
MX-220
220 MHz., black & chrome
MX-440-5
440 MHZ 5 dB gain

Unity Gain

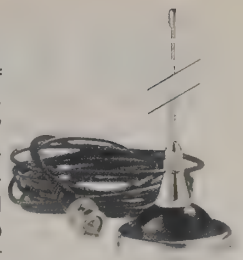
Model THF
VHF/UHF Trunk Lip Mount Antenna

Model UHT-1
VHF/UHF Roof/ Deck Mount Antenna



New-Tronics Antenna Corporation
One New-Tronics Place
Mineral Wells, Texas 76067-9563
Phone: **940.325.1386**
Toll Free: **877.994.9499**
Fax: 940.328.1409

Model UGM
VHF/UHF Magnetic Mount Antenna



Extend the range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to ¼ wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Highly efficient mylar protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 10 ft. of mini-coax with BNC connector.

Resonator Spring
RSS-2
Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This ¾" x 3" x ½" spring absorbs shock when the antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, and male on the other.

MBM "Super" Magnet

- 95 lbs. Pull strength
- Powerful 5 inch diameter magnet
- 16 feet RG 58 coax with PL-259 connector.
- 3/8" x 24 female threads
- Recommended for antennas up to 48" in length.

Model SF-2
Low Cost 3.4 dB Gain, 2 meter 5/8 λ for 3/8" x 24 thread mounts.

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless radiator
- Length: 4 ft.

Model SF-220
Low cost 3.4 dB gain 220 MHz. 5/8 λ for 3/8" x 24 thread mounts.

Model MKR-2 Radial Kit
Contains three de-coupling radials and mount to convert series fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations of portable use. Heavy duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8" x 24 threaded base.

Bumper Mount BM-1
Design is rugged for supporting Hustler antennas with the Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and a bumper strap clamp at the bottom.

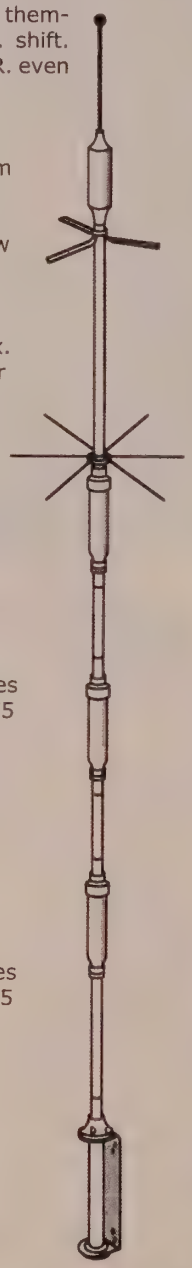
Fixed Station Multi-Band HF Vertical Antennas

Hustler, Inc. has been producing HF vertical antennas of unusual electrical performance and mechanical integrity since 1959. Many of those original verticals are still in service after over 30 years of reliable operations.

Our exclusive trap design offers the lowest loss possible. A special extrusion process allows us to produce trap covers to an otherwise unattainable close tolerance, assuring accurate and permanent resonance. Our highly accurate traps provide top signal reports and consistent contacts.

Accurate tuning is made possible by the wide range of tuning flexibility designed into our verticals. Not only can you use the normal adjustable tubing to change resonance, but the traps themselves can be field tuned for an additional 2 MHz. shift. This flexibility will enable you to achieve a good S.W.R. even if your installation is not ideal.

- Broadbanded – low VSWR at band edges
- Power capability – full legal limit on SSB or CW
- Solid one inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss, high strength insulators.
- Stainless steel clamps and hardware.
- Easy assembly and tuning.
- Single line feed with any length of 50 ohm coax.
- Use as ground mount with or without radials, or elevated mount with radials.



Model 6-BTV

Bands	10-15-20-30-40 & 75 or 80 meters
Length/weight	24 ft. / 16.5 lbs.
Mounting	Vertical support up to 1.75" O.D.
Wind Load	29 lbs. @ 70 mph.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. On 75 or 80 meters)

Model 5-BTV

Bands	10-15-20-40 & 75 or 80 meters
Length/weight	25 ft. 1 in. / 16.5 lbs.
Mounting	Vertical support up to 1.75" O.D.
Wind Load	29 lbs. @ 70 mph.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. On 75 or 80 meters)

Model 4-BTV

Bands	10-15-20-40 meters
Length/weight	21 ft. 5 in. / 15 lbs.
Mounting	Vertical support up to 1.75" O.D.
Wind Load	28 lbs. @ 70 mph.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 1.6:1 at band edges

30 Meter Add-on Kit for 4-BTV and 5-BTV

Model 30-MTK

Full 30 meter band coverage
Will not affect normal operation
Easy installation
All hardware included

Hustler Resonators

Standard Resonators

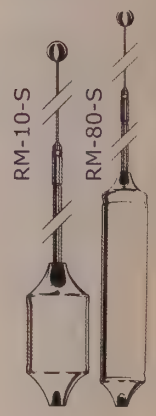
Power rating – 400 watts SSB

Part	Description	Approximate Bandwidth (KHz.) 2:1 SWR or Better
RM-10	10 Meter	150-250
RM-11	11 Meter	150-250
RM-12	12 Meter	90-120
RM-15	15 Meter	100-150
RM-17	17 Meter	100-150
RM-20	20 Meter	80-100
RM-30	30 Meter	50-60
RM-40	40 Meter	40-50
RM-75	75 Meter	25-30
RM-80	80 Meter	25-30

Super Resonators

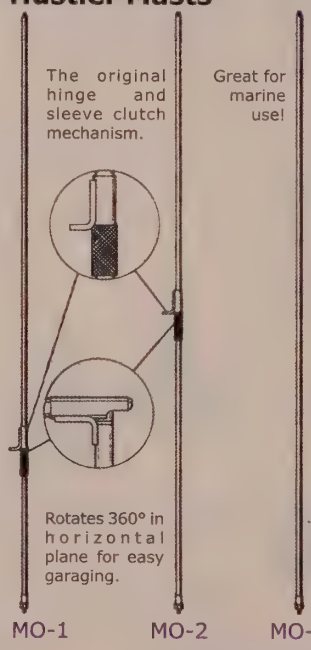
Power rating – full legal limit. Super Resonators also offer wider bandwidth, especially on 40, 75 and 80 meters.

Part	Description	Approximate Bandwidth (KHz.) 2:1 SWR or Better
RM-10-S	10 Meter	250-400
RM-11-S	11 Meter	250-400
RM-15-S	15 Meter	150-200
RM-20-S	20 Meter	100-150
RM-40-S	40 Meter	50-80
RM-75-S	75 Meter	50-60
RM-80-S	80 Meter	50-60



Mobile HF Antennas

Hustler Masts



MO-1
Mobile mast 54" high, for deck or fender mounting. Folds over at 15" above base. Made of highest quality heat treated aluminum and chrome plated brass.

MO-2
Mobile mast, 54" high, for bumper mounting. Folds over at 27" above base.

MO-3
Mobile mast, 54" high, solid aluminum with white vinyl coating. Does not fold over.

MO-4
HF Mobile mast only 22" long. Suitable for trunk or deck mounting. Included three new tip rods. 3/8" X 24 threads on both ends.

Reliability & Performance... Beyond your Expectations!

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160-6 Meters Mobile

PHF Series Antennas

Pro-Am's Monoband PHF Series consists of a black fiberglass lower section with integral coil and an adjustable (and removable) stainless steel whip (except for PHF160). These time-proven HF antennas are especially designed for maximum efficiency, low SWR, and broad bandwidth. They are power rated at 250 Watts P.E.P. and built to withstand considerable use. Standard 3/8 x 24 threads. Total assembled length on all models: 96". (Exception: PHF6: 58")

Model	Band	Band Width
PHF160	160 Meters	12 KHz
PHF75	75 Meters	36 KHz
PHF40	40 Meters	60 KHz
PHF30	30 Meters	100 KHz
PHF20	20 Meters	150 KHz
PHF17	17 Meters	175 KHz
PHF15	15 Meters	200 KHz
PHF12	12 Meters	300 KHz
PHF10	10 Meters	500 KHz
PHF6	6 Meters	1000 KHz

Thru Glass 2 Meter

GM-144

2M Thru-The-Glass Antenna Kit featuring a 27-1/2" Copper Plated Whip with Black Finish and 14' of RG58 to a PL-259. Gain: 2.5dB over 1/4 wave. VSWR: 1.5:1 through the band. Max. Power: 50W. Field Tuneable.

NOTE: Some newer autos have "passavated glass" which does not permit antennas to work properly. Check your manual or dealer.

Thru Glass 2 Meter and 70CM

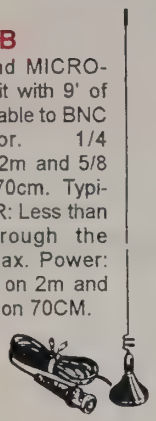
GM-270

Dual Band Thru-The-Glass Antenna Kit featuring a 26" Copper Plated Whip with Black Finish and 14' of RG58 to a PL-259. Gain: 2.6dB over 1/4 wave at 2m & 4.0dB over 1/4 wave at 70cm. Typ. VSWR: Less Than 2.0:1 through the bands. Maximum Power: 50W. Field Tuneable.

Mag Mount Kits

MM270B

Dual Band MICRO-MAG™ Kit with 9' of RG174 Cable to BNC Connector. 1/4 Wave at 2m and 5/8 Wave at 70cm. Typical VSWR: Less than 1.5:1 through the band. Max. Power: 50 Watts on 2m and 25 Watts on 70CM.

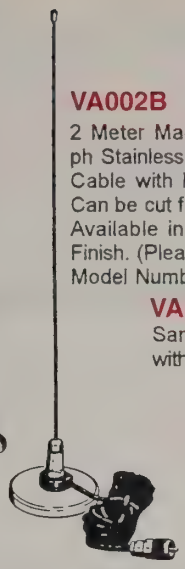


VA002B

2 Meter Mag Mount Kit. 17-7 ph Stainless Steel Whip, 12' of Cable with PL-259 Connector. Can be cut for 220 or 450 MHz. Available in Chrome or Black Finish. (Please specify "B" after Model Number for Black)

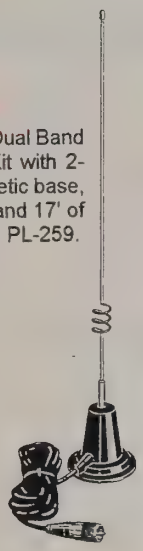
VA002BBN

Same as VAA002 but with BNC Connector.



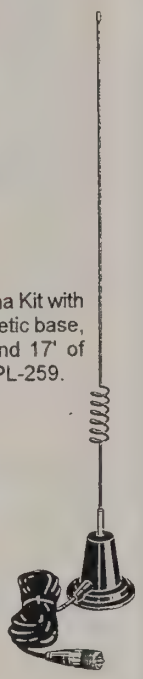
PA270M

2M-3/4M Dual Band Antenna Kit with 2-1/2" magnetic base, 19" whip, and 17' of RG58 to a PL-259.



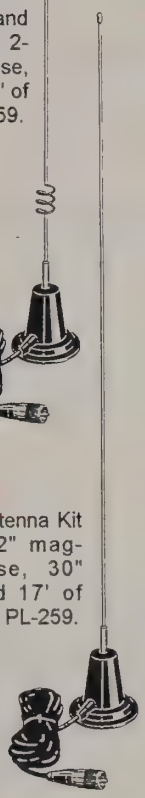
PA440M

3/4M Antenna Kit with 2-1/2" magnetic base, 22" whip, and 17' of RG58 to a PL-259.



PA220M

1-1/4M Antenna Kit with 2-1/2" magnetic base, 30" whip, and 17' of RG58 to a PL-259.



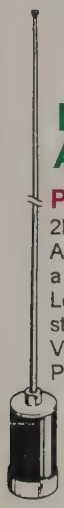
PA144M

2M-6M Dual Band Antenna Kit with 2-1/2" magnetic base, 49" whip, and 17' of RG58 to a PL-259.

VHF Antenna

PB144

2M, 3dB Gain VHF Antenna featuring a matching Low Loss Coil w/ moto style threads. VSWR: 1.5:1. Power: 100W.



Dual Band Antenna 2 Meter and 70CM

MO144-440

Dual Band Antenna to Cover it All! 19" Stainless Steel Whip. 1-1/8" Threads Match Pro-Am's Mounts and 3/4" Hole Motorola TAD/TAE Mounts. Great for all band scanners 25 MHz - 1.3 GHz. SWR: Less than 2:1. Gain: Unity on 2m and 2.1dB over 1/4 Wave on 70CM. Power FM: 150 Watts.

Hand-Held Antennas

144BNC

Electrical 1/4 Wave "Rubber Duck" gets high performance in VHF (144-148 MHz.) 12" in length. BNC connector for quick disconnect.

450BNC

Full 1/4 Wave "Rubber Duck" gets high performance in UHF (430-470 MHz.) 6-1/2" in length. BNC connector for quick disconnection.

Multi-Band Antenna System

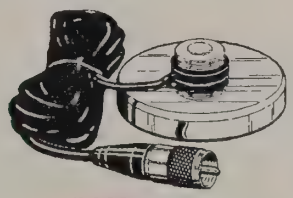
AB5

Pro-Am's AB5 System consists of a 4' aluminum mast and tri-top adaptor with resonators for 10, 15, 20 40, and 75 meters. Mast fits any standard 3/8 x 24 thread mount. The 10, 15, and 20 meter resonators cover SSB ranges without extra tuning. The interchangeable 40 and 75 meter resonators are easily tunable.

Mount and Accesories

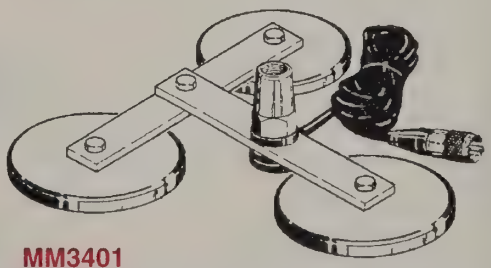
PAT2

Low Profile Trunk Mount including 17' of RG58 Cable with PL-259 Connector. (Available in Black Finish: specify with a "B" suffix.)



PAM

3-3/4" Diameter Low Profile Magnet Mount Kit pre-wired with 12' of RG58 Cable to a PL-259 Connector. (Available in Black or Chrome Plated; Add "B" suffix for Black)



MM3401

Maxi-Magnet Mount Kit features three 5" (401) magnets properly spaced on a heavy duty aluminum frame. The MM3401 is pre-wired to Valor's patented wafer termination with 17' of RG58 coax and PL-259 connector. Accepts standard 3/8" x 24 antennas. Available with Black magnet cups: **MM3401B**.

See Price Guide under Pro AM by VALOR

AMIDON Associates, INC.

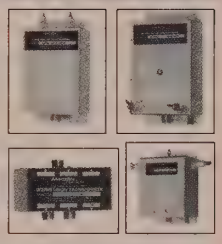
NEW & REVOLUTIONARY BALUNs and UNUNs

2 KW to 10 KW • 98% Efficient • 1 MHZ to 50 MHZ

Dr. Jerry Sevick, W2FMI, researched, experimented and wound over 1000 Baluns and Ununs transformers for use in Amateur Radio and used over 1 mile of wires over a 20 year period. The results of his sensational work are these new powerful, 2 Kw to 10 Kw, 98% efficient, 1 Mhz to 50 Mhz Baluns and Ununs. His work is also featured in over 20 articles and 3 books.

B **A**

		PART NO.	PRICE
50Ω:12.5Ω	Direct Connect Yagi Beam	4:1-HB50	$49.95
50Ω:50Ω	1/2λ Dipole or Yagi Beam	1:1-HBH50	$49.95
50Ω:75Ω	1/2λ Dipole at 0.22λ above Ground	1.5:1-HB75	$69.95
50Ω:100Ω	1/2λ Dipole at 0.22λ, 0.33λ & Quad Loop	2:1-HB100	$69.95
50Ω:200Ω	Folded Dipole, Log Periodic Beam	4:1-HBM200	$49.95
50Ω:200Ω	Off Center Fed Antennas	4:1-HB/U200	$69.95
50Ω:200Ω	10 Kw Antenna Tuners, G5RV Log Periodic Beam & Ladder Line	4:1-HBHT200	$69.95
50Ω:300Ω	300Ω Ribbon Folded Dipole	6:1-HB300	$69.95
50Ω:300Ω	Off Center Fed Antennas	6:1-HB/U300	$89.95
50Ω:450Ω	Twin Lead (between 9:1 - HB450's)	9:1-HB450	$89.95
50Ω:600Ω	Rhombic & V-Beam Antenna	12:1-HB600	$199.95



U **N**

PART NO.	IMPEDANCE MATCH	PRICE
2:1-HDU50	50Ω:22Ω & 25Ω	$49.95
2:1-HDU100	100Ω & 112.5Ω:50Ω	$49.95
1.5:1-HU75	75Ω:50Ω	$49.95
4:1-HCU50	50Ω:12.5Ω	$49.95
9:1-HU50	50Ω:5.56Ω	$49.95

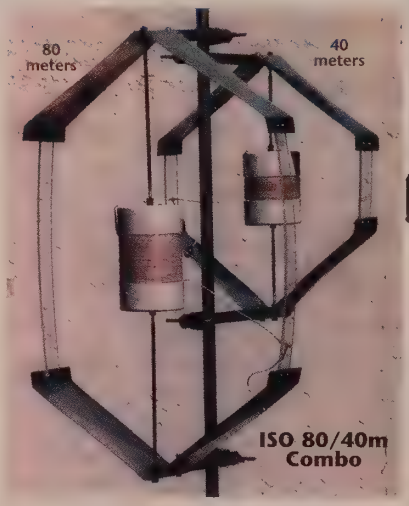
PART NO.	IMPEDANCE MATCH	PRICE
1.78:1-HDU50	50Ω:28Ω & 12.5Ω	$49.95
1.56:1-HDU50	50Ω:32Ω & 18Ω	$49.95
1.78:1-HMMU50	MULTIMATCH UNUN	$69.95
BEV-U50 Beverage Ant. Unun	50Ω: 800Ω, 612Ω, 450Ω	$69.95

ISOTRON BILAL COMPANY

See product reviews **73 Magazine:** Oct. '84, Sept. '85, Mar. '86, Nov. '94, Apr. '96. **CQ magazine:** Dec. '88. **WR:** Mar '91.
Copies available send SASE: **BILAL COMPANY**
137 Manchester Dr. Florissant, CO 80816

Antennas for Very Limited Space - Simple & Effective

- Solve virtually any restricted space problems.
- Easy, Quick, and simple installation.
- Handles up to 1,000 watts PEP.
- Excellent portable operation - emergencies, RV's, field day, motels, Maritime operation.
- Not dependent on grounding for performance.
- Unobtrusive appearance, making a very discreet looking installation.
- Very Stealth.
- Excellent Low Noise reception and transmitting quality performance is not compromised by its compact design.
- Tunes and performs without radials.
- Multi-band operation on one feedline with back to back mounting. Any other combination of three bands may be substituted on special order.
- Durable construction, can be used in extreme weather conditions, will not bend in high winds. No motors or mechanical tuning devices to fail.



Common Specifications:
Stainless steel fasteners • Tempered aluminum • Cast acrylic & PVC insulators • Zinc plated U-bolts • THHN #14 solid copper coils • Wind rating 85 mph • Coax feed, 50–75Ω • Omni-directional pattern • 1000W PEP rating (300W, CW, AM, FM, RTTY) • Bandwidth is within 2:1 SWR (may vary with environment).

Individual Specifications:

Model	ISO 160C	ISO 80	ISO 40	ISO 20	ISO 15	ISO 10	ISO6
Band	160m	80m	40m	20m	15m	10m	6m
Freq.	1.8-2.0MHz	3.5-4.0MHz	7.0-7.3MHz	14-14.35MHz	21-21.450MHz	28-30MHz	50-54MHz
hxwxd (")	9.5' x16x15	32x16x15	22x16x15	21x8x4	21x1½x4	16x1½x4	16½x2x4
BW	100 KHz	110KHz	250KHz	350KHz	450KHz	1MHz	1.25MHz
Windload	1.697 ft²	1.37 ft²	1.0 ft.²	0.23 ft.²	0.23 ft.²	0.16 ft.²	0.13 ft.²
Weight	7 lbs.	6 lbs.	4 lbs	2 lbs	2.0 lbs	1.5 lbs	1.5 lbs.
PRICE	**$169.95**	**$95.95**	**$85.95**	**$74.95**	**$64.95**	**$64.95**	**$69.95**

Multiband Models:

ISO 80/40 COMBO Covers same as individual specs above (one feed line) 32x16x30", 2.37 ft.², 10 lbs* **$168.95**

ISO 20/15/10 COMBO Covers same as individual frequency specs listed above (one feed line)* **$187.95**

SPECIAL ORDER! – You can make up your own combination. Substitute 30m for 40m in the 80/40 Combo or 17m for 12m in the 20/15/10 Combo. **Combos require coaxial "T"s & jumpers (not included).*

COMET™

HF/VHF/UHF Mobile Antenna for the new radios that operate HF/6M/2M/70cm

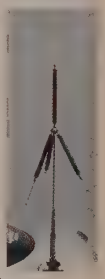
CA-UHV Designed for 6 & 2M and 70cm basic operation without tuning. Additional coverage for 40, 15 and 10 meters may be added by installing the supplied coils for those bands. Coils for 20 and 17 meters are optional. Choose either one, two, or three coils and add one to the top, and one or two to the side, in any combination. Automatic bandswitching. Each HF element tunes independently without effecting VHF/UHF.

Only 7 ft. 2 inches tall with the 40M coil attached to the top. A unique fold-over hinge pivots approximately 5 inches from the bottom for garaging, entering parking structures, etc.

Installs on any standard SO-239 (PO) type mount; no special brackets are needed. Several duplexers/triplexers are available for all of the multiband radios, including the FT-100, IC-706MKIIG, FT-847, etc. – *see the index under duplexers for selection.*

CA-UHV HF/6M/2M/70cm antenna **$139.95**
L-14 20M coil.... **$36.95** **L-18** 17M coil.... **$29.95**
CF-360B 1.3-30/50-470 MHz duplexer..... **$69.95**
CF-530 1.3-90/125-470 MHz duplexer..... **$69.95**

HA-4S HF Mobile Antenna (right)
Automatic bandswitching between (4) HF bands changing coils or moving plugs. Standard coils include 40, 15, 12, 10M. 20M coil optional. Compact and lightweight, only 4 ft. 10 inches tall. Mounts on trunk-lip style bracket. Construction includes gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a convenient hinged base that allows 90° fold-over for garaging, etc..... **$179.95**



CYA-240 Dual Band 2M/70cm Antenna
Single boom design with five UHF elements in front of three VHF elements, only 5 ft. 3 inches long. Separating yagis from each other produces the best radiation pattern. Gain: 7.4 dBd on 144–148MHz; 9.5dBd on 440–450MHz. F/B ratio is 18dB. The included power divider allows single feedline operation. High-grade aluminum and stainless steel hardware. Elements are secured with wing nuts making portable use easy. Horizontal or vertical mounting. Power rating: 300W SSB, 150W FM/CW. Accepts masts 1¼ to 2½", 4 lbs. 7oz.. **$99.95**

CA-52HB4 Wide Band 6 Meter Beam

Type HB9CV, 4-element	**Max Power** .....400W, SSB
Frequency .....50MHz band	**Boom Length** .....10.5 ft.
Impedance 50Ω	**Turning Radius** .....7.3 ft.
VSWR ..<1.5 :1 (50-54MHz)	**Connector** SO-239
Gain .....10.4 dBi	**Mast Dia.** ..... 1.0 to 2.5 in.
Half Power Angle .....<54°	**Weight** .....4 lbs, 14 oz
F/B ratio .....Over 19 dB	

PRICE $119.95

GH-50 6 Meter Vertical Antenna

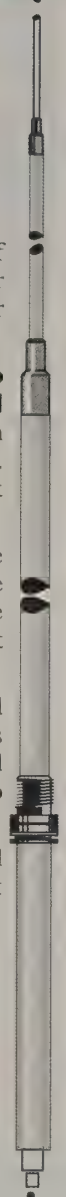
Type ..... Omnidirectional	**Bandwidth** .1 MHz, tunable
Frequency..... 50MHz band	**Gain**. 2.5dBi over 1/4-wave
Construction ..... One piece white fiberglass with tuning stub on top	**Maximum Power**..20W SSB 60W FM
Length .....7 ft., 10 in.	**Connector** SO-239
Impedance 50Ω	**Weight** .....2 lbs, 10 oz.
VSWR ..... 1.5:1 or less	

PRICE $109.95

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

SOLARCON ANTENNAS A99

10M Base Antenna with Twin Ring Adjust-A-Match Tuning



The **A-99** is a voltage fed half wave variable mutual transfer inductance tuned antenna for 10 meters.

It's economical and **easy to use!** — the **SOLARCON** sealed base unit is tuned with external inductance rings. Impedance remains constant over the tuning range.

Simple Tuning! — raising the tuning rings raises the frequency and lowering the rings lowers the resonant frequency.

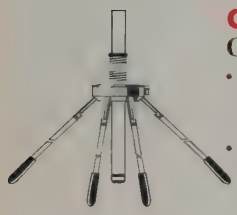
A real beauty! — rugged three-piece white fiberglass construction with triple plated brass fittings. It's easy to assemble and install.

The optional GPK-1 Ground Plane Radial Kit makes it perform even better!

Specifications:

Height	17 ft. 8 in.	Radiation Angle	<20°
Sections	3	Grounding	DC Ground
Band	10 meters	Mounting	1-1/2" mast
Gain	3 dBi	Coaxial Cable	52Ω
Power Limit	2000W	Connector	SO-239

A-99 Price: $64.95



GPK-1
Groundplane Kit

- 30% more power gain and lower angle of radiation for greater range.
- Kit includes 1 collar and 4 fiberglass radials.

$39.95

UNADILLA

W2AU/W2VS 5-Band Antenna Kit Provides Low SWR on 80 & 40M and resonant performance on 10, 15 & 20M. Includes 40M traps, W2AU 1:1 balun, end insulators, 120' of #14 stranded copper wire & instructions. 110' long, rated 2KW PEP..... **$85.95**

THE SMILEY ANTENNA CO.

Hand Tuned Antennas for Hand Held Radios

Each Smiley antenna is individually tuned to resonance at band center under normal operating conditions (no ground plane, no radials). They're manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation with a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

THIN STICK 1/4-wave telescoping dual band antenna for 144 and 220MHz bands ..... **TS $16.95**

SUPER STICK II (A) 2M, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended. Usable fully collapsed, or one section 1/4 wave. 54" extended, 10" collapsed..... **SS-II $19.95**

SUPER STICK II COMBO As above, but incl. a 2M Stubby Duck antenna **(D)** ..... **SS-II/COMBO $26.95**

5/8 SLIM DUCK (B) 2M, 5/8-wave, 7db gain, flexible base loaded ant. 12" long **5/8 SLD-2 $17.95**

5/8 SLIM DUCK COMBO As above, includes a 2M meter Stubby Duck **(D)** ...**5/8 SLD-2 COMBO $24.95**

REGULAR DUCK (C) For 2M. Tuned Ducks show a 3db gain over other Rubber Ducks because they are *impedance matched* for hand-helds **RD-2 $14.95**

STUBBY DUCK (D) Tuned, for 2M **RDS-2 $14.95**

SUPER STICK III A 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one-section 1/4-wave. 36" extended, 8¼" collapsed .....**SS-III $19.95**

SUPER STICK III/COMBO As above but includes a 220MHz Stubby Duck **(G)** ..... **SS-III/COMBO $26.95**

5/8 SLIM DUCK (E) 220MHz, 7db gain, flexible base loaded antenna. 9" long **5/8 SLD-220 $17.95**

5/8 SLIM DUCK COMBO As above, but incl. 220MHz Stubby Duck **(G)**.....**5/8 SLD-220 COMBO $24.95**

REGULAR DUCK (F) 220MHz, tuned **RD-220 $14.95**

STUBBY DUCK (G) 220MHz, tuned **RDS-220 $14.95**

SUPER STICK IV (H) 440MHz 5/8-wave, flexible telescoping ant. 6-9db gain extended; usable collapsed. 18" extended, 5¼" collapsed.....**SS-IV $19.95**

SUPER STICK IV COMBO As above, but includes a 440MHz Stubby Duck **(K)**..... **SS-IV/COMBO $26.95**

SLIMLINE (I) 440MHz, 1/4-wv. flex ... **SL-440 $12.95**

5/8 SLIM DUCK (J) 440MHz, 7db gain, flexible base loaded antenna. Length: 5" **5/8 SLD-440 $17.95**

5/8 SLIM DUCK COMBO As above, but includes a 440MHz Stubby **(K)** ... **5/8 SLD-440 COMBO $24.95**

STUBBY DUCK (K) 440MHz, tuned **RDS-440 $14.95**

MINI DUCK (L) 440MHz, tuned . **RDMD-440 $14.95**

FLEX-COIL (M) 2M, 1/2-wave, 7-9 dB gain, flexible base, 35" fully extended.....**FLX 1/2 WAV-2M $25.95**

270A (N) Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440 MHz). The 270A is also available with SMA..... **$19.95**

TAQ 1/4-wave whip antenna, specify for 2M, 220 or 440MHz **$10.95**

PAR

OMNIANGLE models for 10m, 6m, 2m, 220MHZ & 440MHz (FIXED or MOBILE). The perfect complement to high-gain directional arrays, allowing all-direction local work and monitoring for DX.

Outperforms Halos, Loops and Turnstiles! It's considerably longer than a halfwave dipole, and coupled with the unique triangle shape, yields a horizontally polarized antenna whose pattern is within 0.8dB of being a perfect circle, & exhibiting wide bandwidth.

Rated at 150W, it's built-in matchbox and current balun allow feeding with 52Ω coax & easy tuning to desired frequency with a perfect match. The design virtually eliminates detuning due to moisture.

Stack two or four OMNIANGLES for 3 to 6dB omnidirectional gain and lower angle of radiation.

OmniAngle Models

OA-28 28–30MHz..... **$74.95** **OA-222** 222–224MHz **$54.95**
OA-50 49.5–54MHz ... **$63.95** **OA-432** 420–450MHz **$54.95**
OA-144 138–150MHz **$54.95**

Stacking Harnesses for 2 OmniAngles (3dB Gain) - Made of Belden 8213 and silver/gold/teflon connectors, 70cm model uses N connectors

SK-50 for OA-50 ..... **$36.95** **SK-222** for OA-222.... **$34.95**
SK-144 for OA-144.... **$34.95** **SK-432** for OA-432.... **$54.95**

50-EL3 6 Meter Yagi Perfect for portable, rover or stealth work. Only 5 ft. long and weighing 3 pounds this antenna is ruggedly built from 6061-T6 aluminum and stainless steel hardware. The *optional* 144-AUX 2 meter kit expands the antenna to 4 effective elements on 2 meters and retains the 3 elements on 6 meters on the same boom. With both bands installed, the antenna looks like a regular TV antenna. Separate driven elements, requires 2 feed lines

50-EL3 $91.95 **144-AUX** 2m kit **$42.95**

Specifications: 50-EL3

Frequency	50-54MHz
Forward gain	7dBd
Number of Elements	3
Matching	Gamma
F/B ratio	20dB
Power Handling	200W
Boom Length	60"
Turning Radius	63"
Weight	3 lbs
Longest Element	119"
Mast Size	1 to 1.5"

Specifications: 144-AUX

Frequency	144-148 MHz
Forward gain	7dBd
Number of Effective Elements	3
Matching	Gamma
F/B ratio	15dB
Power Handling	200W
Kit add on weight	1 lb

ANTENNAS

Vertically Speaking THE BEST!

VERSATILE MULTIBAND VERTICAL ANTENNAS

- **HF2V**
- **HF6V**
- **HF9V**

Offering 2, 6 and 9 Band Verticals with optional 160 Meters. Butternut's unique, **patented design** solves traditional problems that are associated with vertical antennas. Many verticals rely on lossy traps to offer multiband performance - which causes narrowed bandwidth. The Butternut trap-free design offers superior bandwidth and much greater radiation efficiency.

SPECIFICATIONS
Frequency:
HF2V • 40 & 80M
HF6V • 10, 15, 20, 30, 40 & 80M
HF9V • 6, 10, 12, 15, 17, 20, 30, 40 & 80M (Opt.160M kit avail.)

Height: 26 ft. HF6V/HF9V
32 ft. HF2V

VSWR @ Resonance: 1.5:1 or less on all bands

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Van Gorden Engineering

Dipole Antennas: Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, plastic insulators, and 100 ft. of nylon rope. Rated for full legal power. May be used in an inverted-V configuration.
D-80 80/75m, 130'. **$32.95** **D-15** 15m, 22'..... **$27.95**
D-40 40/15m, 66'.. **$29.95** **D-10** 10m, 16' **$26.95**
D-20 20m, 33' **$28.95**
Shortened Dipoles: Construction is the same, and includes traps as shown above.
SD-80 75/80m, 90'... **$36.95** **SD-40** 40m, 45'.. **$34.95**

All-Bander Dipole Antenna Covers 160 to 10M using an antenna tuner with balanced output. Full 135 ft. long (or less, as an inverted V or sloper). Trim to fit small lots. Assembled, with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. 2KW PEP..... **$29.95**
SHORTY All-Bander As above, but with loading coils to shorten the length to 70 ft. overall..... **$44.95**

Multiband Antenna:

G5RV Covers 3.5 to 30 MHz, +1.8 MHz as a Marconi-type antenna with a tuner. Consists of a 102 ft. flat top with a 31 ft. long section of 300Ω KW twinlead, a transformer/coupler and 70 ft. of RG-8X coax and connector. 2KW PEP, assembled **$50.95**
G5RVJr 7–30MHz , 52 ft., 17 ft. twinlead..... **$24.95**
G5RV-E 3.5–30MHz, 102 ft., 31 ft. twinlead.. **$28.95**
G5RV-M 1.8–30MHz, 204ft., 65 ft. twinlead .. **$50.95**

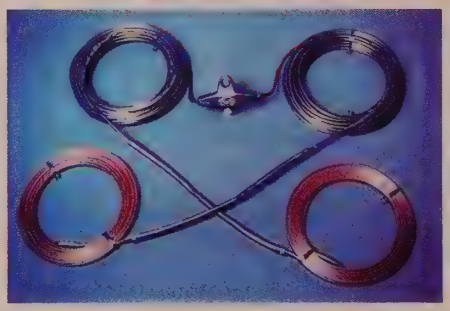
Arrow Antenna

Pictured is Gerald Schmitt, KK5YY, working VE6EGN on the AO27 Amateur Radio Satellite using a Yaesu VX-1R at 500mW output power connected to an **Arrow 146/437-10 antenna**. KK5YY worked from many Alaskan grid squares during his 1998 trip, including a contact from the Arctic Circle.

The Arrow is designed specifically to allow portable Satellite operation using just an HT. This means engineering it to provide maximum gain and efficiency in the smallest practical size and weight.

The boom construction is 3/4" square aluminum stock, 37½" long with a foam grip on the back end for comfort. The (3) VHF and (7) UHF Gamma matched elements with separate BNC connectors are aluminum arrow shafts which are strong & lightweight, and plastic tipped for safety.....**146/437-10 $73.95**

INTERNATIONAL ANTENNAS Double Bazooka Antennas



On the WEB: www.iacantennas.com

Double Bazooka 1/2-wave antennas are constructed with a flat-top of 50Ω coax and a section of open-wire line at each end. The shield is split in the middle, but the center conductor and insulation are left intact. The feedline connects to the split shield which becomes the radiating element. This results in quiet, broadband operation with 98% efficiency and 50Ω feedpoint; balun not required. Mounts horizontally or as an inverted V. Handles legal RF power limit. Has weatherproof center insulator with coax connector.

The 80 meter version will operate efficiently on all bands with addition of antenna tuner.

160M Bazooka, 1.8 MHz (160M), 248' **$195.95**
80M Bazooka, 3.5 MHz (75-80M), 121'..... **$135.95**
40M Bazooka, 7 MHz (40M), 64'..... **$115.95**

THE NEXT GENERATION COMPETITION GRADE TRIBAND YAGI!

SKYHAWK 3X10

3 band & 10 element

20-15-10 Meters

- WIDE BANDWIDTH
- EXCELLENT F/B RATIOS
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MFJ ENTERPRISES, INC.
HT Range Extenders

MFJ-1714 Long Ranger™ 2M Halfwave For really long range, this MFJ end-fed halfwave is hard to beat. It out performs a 5/8 wave on a handheld because the 5/8 wave needs a ground plane where the MFJ halfwave does not. It is shorter, lighter, has more gain & places less stress on your antenna connector than a 5/8 wave. When collapsed, it performs like a rubber duck. It is 40" extended and 10½" collapsed..... **$16.95**

MFJ-1712 Dual Bander™ 2M and 440 MHz Got a new dualband handheld or separate units? One antenna fits all. It's 1/4 wave for 2M and 5/8 wave with gain for 440 MHz. 7¼" collapsed, 19" extended..... **$14.95**

MFJ-1710 Pocket Linear™ 3/8 Wave, 2M Carry in your pocket like a ballpoint pen. When using your rubber duck, on the fringe and noisy, put on the Pocket Linear, extend to 24½" and carry on your QSO. Pocket clip. 5¼" collapsed **$9.95**

RuffRider™ Super Gain Mobile Antennas

This series features the finest quality construction using precision machined components. Designed to battle the elements, handle rugged rides & daily highway abuse.

Dual band 144/440 MHz mobiles have stacked stainless steel elements with high-Q phasing coils resulting in outstanding gain. Phased radiators flatten radiation patterns & concentrate transmit power at the horizon for max. distance.

All models are factory tuned for an SWR less than 1.5:1 and have 50Ω impedance. Each comes with a SO-239 base but also includes a FREE NMO adapter.

MFJ-1402 *RuffRider™* **Junior** 16½" ant. fits in any garage on any vehicle. 3dB gain on 2M, 5.5dB gain on 440MHz. Handles 100W. No fold-over..... **$34.95**

MFJ-1412 *RuffRider™* **High Power.** Only 40" long but handles full 200W. Great for a high power mobile and amplifier. 3dB gain on 2M, 5.5dB gain on 440MHz **$49.95**

MFJ-1422 *RuffRider™* **High Gain** 41½" long antenna gives you extra gain with little increase in height. Handles 150W. 3.2dB gain on 2M, 5.7dB gain on 440MHz **$49.95**

MFJ-1432 *RuffRider™* **Super Gainer** Tall 62½" brute gives you a whopping 5dB gain on 2M, 7.6dB gain on 440MHz. Handles 150W **$69.95**

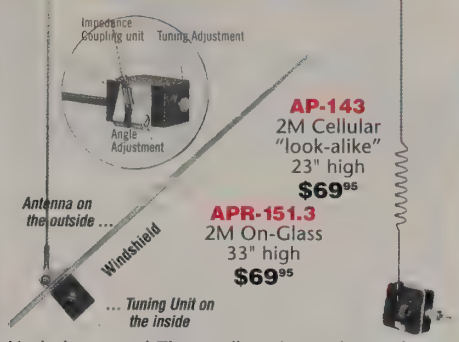
RuffRider™ Mobile Mounts

Super heavy duty antenna mounts with SO-239 base. Use adapter for NMO. Includes 10' of low loss coax with PL-259 connector. Bases are heavy duty and super rigid to reduce SWR flutter due to wind vibration. Double Allen set screws fasten the radiator & a specially treated center pin provides excellent electrical connection. Allen wrenches, protection caps and locking screws included.

MFJ-340 Mirror/Luggage Pipe Clamp Mount Mounts on support rod of mirror, luggage rack or spare tire carrier of a truck, van, RV or SUV. Mounts on any horiz., vert. or angled rod/pipe up to 5/8" in dia. Secures VHF, UHF & medium size HF antennas even at highway speeds. Convenient thumb and finger turn knob makes fold-over operation quick and easy. Locks in 12 different positions..... **$34.95**

MFJ-345 Trunk/Hatchback Lip Mount Mounts to any lip on your vehicle. Extra-wide 4" lip and large reinforcing tabs on each side safely distributes the load. Secures large VHF, UHF and medium size HF antennas even at highway speeds. Scratch-proof rubber guard protects vehicle's finish **$34.95**

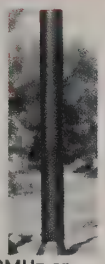
ANTENNA SPECIALISTS
"On-Glass™"Mobile Antennas



No holes to cut! The small Tuning Unit attaches to the glass inside the vehicle, and couples capacitively through-the-glass to the Radiating Element mounted on the outside. Installs with easily removable adhesive. Includes adhesive, 15 ft. of coaxial cable with PL-259 connector.

Power	100 watts	**Radiator**	Electrical 1/2-wave
Freq. Range	144-174 MHz (APR-151.3) 138-150 MHz (AP-143)	**Coupling Unit**	Shunt fed, DC gnd
Bandwidth	6MHz, tunable	**Whip Material**	Stainless steel, black DURA-COAT ™ finish
VSWR	Less than 1.5:1	**Whip Length**	33 in. (APR-151.3) 23 in. (AP-143)
Impedance	50Ω nominal	**Cable**	15' RG-58/U w/PL-259

Forbes Group
Ventenna™



Get around those antenna restrictions & finicky neighbors. **Ventenna** is virtually unnoticeable - it looks like part of a normal structure. To install, just slip over an existing 1"-2½" plumbing vent pipe, connect the coax – you're on the air.

Ready to go! – No Tuning or Measuring required.

Single band models for 2 meters, 220MHz or 440MHz & a 2M/440MHz Dual Bander.

VT-14 2 meters, 3 ft. tall, 2.6dB gain **$49.95**
VT-22 220MHz, 25" tall, 2.6dB gain..... **$49.95**
VT-27 2m/440MHz Dual bander..... **$74.95**
VT-44 440MHz, 14" tall, 2.6dB gain **$49.95**
VT-15S Scanner model 3 ft. tall, 2.6dB **$49.95**

NEW WAVE Antenna
PORTAPLE Collapsible Masts

Portable or Temporary antenna installations! 7-section, telescoping masts manufactured from 6061-T6 polished aircraft alum. with a taper from 2"-1¼". Lightweight, easily raised by one person at ground level in secs. Each section joint has a 4" overlap and snaps into place. Conveniently rotates at any section along its length, or securely locks into place. Options: snap-on ant. mount and park-on steel mount.

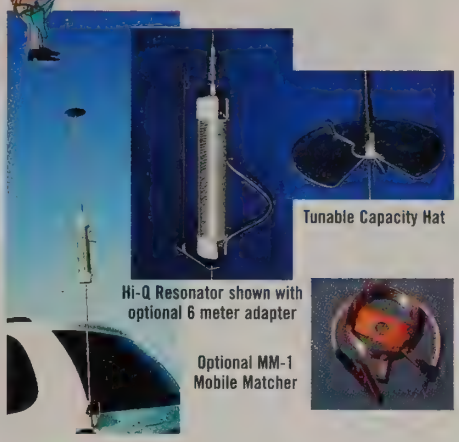
Adventurer 47" to 12 ft, 4½ lbs ... **$109.95**
Traveler 59" to 19 ft, 6½ lbs ... **$124.95**
Rover 71" to 26 ft, 8½ lbs ... **$149.95**
Expeditioner 83" to 33 ft, 10½ lbs . **$174.95**
Explorer 95" to 40 ft, 12½ lbs . **$199.95**
Big Foot Park-on mount, 8½ lbs **$119.95**

Big Foot - park-on steel mount. Primed, ready to paint.

Snap-on Mount Antenna mount. Attach antennas to portaples without tools. Adds 12' to the top **$19.95**

Texas Radio

Bugcatcher
HF MOBILE ANTENNA



BG-1500
- **MULTIBAND COVERAGE** - All Ham bands 3.5 to 30 MHz. Optional 6 meter adapter.
- **EASY BAND SWITCHING** to pre-tuned frequencies on any band – just move the tap!
- Adjustable capacity hat for fine tuning
- 1500 watt power rating, 3/4 inch corona ball
- 24 inch stainless steel base, total overall length 90 inches. • Quick disconnect..... **$169.95**

Options:

Adapt-6m 6M Adapter for BG-1500 ..... **$19.95**

MM-1 Mobile Antenna Matcher Installs between Bugcatcher and mount. Moving the tap provides adjust. of the base impedance to better match the transmission line. Improves performance **$24.95**

CC-4 Extra **Coil Clips** pack of 4 ..... **$7.95**

BM-EXT Mast Extension 24" stainless **$24.95**

Emerson

EAN-3400 HDTV Digital-Ready Amplified Omni-Directional Antenna
- Perfect for installation on DSS satellite mounting bracket for reception of VHF/UHF channels
- 360° signal reception, super low-noise design
- Integrated high-gain amplifier (25dB) with variable gain control, 75Ω coaxial system
- Paintable, UV-protected, 20½ dia. x 8¼ x 1¾ in.
- Includes: AC adapter, DSS mounting brackets and hardware **$49.95**

The Freedom Antenna A concealed, disguised antenna system that mounts on-glass inside the vehicle. It uses an advanced, copper-etched serpentine array contour design. At .013" thick, its ultra-thin interior-mount design virtually disappears into your windshield. At only 3½" square, its "stealth-like" finish blends totally into the glare band. Simply locate the recommended area on your windshield interior. Then, apply like a decal, route the cable and connect it to your radio. No holes to drill, no magnet scratches, no suction cup smudges and no clips. It's limited to 75w of power.

HVA-146 140-155 MHz..... **$69.95**
HVA-460 435-480 MHz..... **$69.95**

TERK

Clip-On TV Antennas

TERK's amplified clip-on antennas attach in minutes to any 18" satellite dish and complement it by adding reception of all local VHF/UHF channels.

Both models cover 54 to 806MHz and contain an internal 10dB amplifier that minimizes signal loss so signals may be distributed to multiple television sets. Power is supplied by your DSS receiver, thru the cable. 10.25"h x 21.25"w x 3.5"d. Durable powder-coated element & weatherproof amp housing.

TV-41 is for **Single-LNB** dishes. It has a diplexer that combines DSS and VHF/UHF signals onto a single coaxial cable. A second, separate diplexer splits satellite and local signals so users can switch between satellite channels and off-air local channels by pressing the antenna button on the DSS receiver's remote controller..... **$59.95**

TV-42 is for **Dual-LNB** dishes. It has two built-in diplexers that provide more than one TV set with DSS signals from the dish and VHF/UHF television signals from the antenna..... **$79.95**

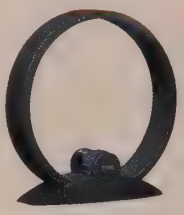
AF-9330 AM-FM Tower Antenna Built-in amplifier with gain contol improves AM and FM reception. Works with tuners and receivers with 75Ω or 300Ω FM antenna inputs. The AM connection consists of a pair of wires with U-clips. Useful 30-40 miles from the broadcast transmitter..... **$24.95**

TV-50 Amplified Outdoor/Indoor TV Antenna

Horizontally-polarized with single element VHF and UHF dipoles for multi-directional TV and FM reception from 54-806MHz. A built-in 11db amplifier can be switched in or out as needed for best performance. The amp is powered from a wall wart terminating in a box containing an on/off switch, connectors, and a cable that goes to your TV.

The TV-50 is 76"l x 2½"w x 1¼"d and mounts almost anywhere in or outdoors. Includes (1) 30 ft. cable, (1) 20 ft. cable, (1) 6 ft. cable, (2) 3 ft. cables, combiner/diplexer, splitter/diplexer, coaxial barrel connector and rubber insulators. The diplexers let you run TV signals from your satellite dish and TV50 into your home on the same cable. Install within 55 miles of nearest TV broadcast tower **$129.95**

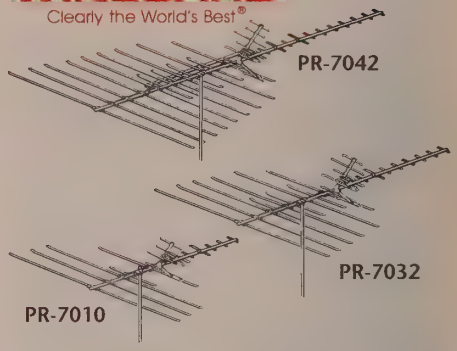
TV-MAST Outside mast mount kit..... **$19.95**



AM-1000 External AM Antenna A passive, fully adjustable 530-1600kHz AM broadcast antenna that provides Improved reception over built-in loops. It is used unattached, next to the radio. Adjustment is accomplished by positioning the unit for best reception, then rotating the tuning dial located at the center of the antenna to match the AM frequency tuned in on the radio. For optimum performance, hook it up directly to an external AM antenna input, if available..... **$49.95**

WINEGARD®

Clearly the World's Best®



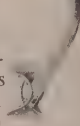
PROSTAR® 1000 VHF/UHF/FM Antennas Features die-cut impedance correlator that allows close spacing of antenna elements. Manufactured from high tensile alum. for a strong, compact ant. that will better withstand strong winds & ice loading. Alum. is protected w/high-quality polymer finish.

PR-7010 **Metropolitan** • 22 Active Elements (9 VHF, 13 UHF) • Boom Length: 66.5"..... **$39.95**

PR-7032 **Far Suburban** • 33 Active Elements (13 VHF, 20 UHF) Boom Length: 103.25"..... **$64.95**

PR-7042 **Fringe** • 43 Active Elements (17 VHF, 26 UHF) • Boom Length: 149.75"..... **$99.95**

SM-2200 **Scanner Antenna** Vertically polarized, omni-directional pattern. Pass band covers LO, HI and UHF public service bands, including Marine and Aircraft. Coated with a high quality polymer to prevent surface oxidation in any type weather. Mounts below TV antenna or on separate mast. Includes 50 feet of 75Ω coaxial cable with F-connectors attached.... **$45.95**



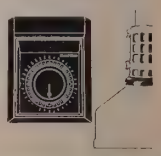
(shown w/DS-2000 Universal Mount)

GS-2000 SENSAR® II **Amplified Antenna**
This 68 channel bi-directional antenna provides excellent reception in metropolitan areas 10 to 55 miles away from TV transmitters. Features built-in modular amp w/VHF gain of 15.5dB & 19.5dB UHF gain, average, and a -15dB FM trap. Includes 117V AC power supply, hardware and an easy-to-install mast clamp assembly. 46.25"l, 10 lbs.. **$79.95**

Channel Master®

REMOTE CONTROL ANTENNA ROTATOR

9521 **Drive Unit:** Handles small VHF, UHF and TV antennas • 1-piece cast alum. housing • Heavy-duty rotator motor, 3-wire control • Wind-tested brake pad • Durable powder-coated finish • Precision-cut gear system • Built-in steel thrust bearings **Control Unit:** Compatible w/most universal remote controls • 69 channel program. memory • Auto synchronization for pinpoint accuracy • Direct access via channel number or compass heading..... **$99.95**



9515 **Drive Unit:** Looks similar to 9521, but has stronger gearing & housing to handle UHF/ VHF arrays and Large TV antennas with a windload of less than 5 sq. ft. **Control Unit:** Manual control, no remote..... **$129.95**

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YAESU

YAESU ROTATORS – precision designed for a wide variety of antenna installations • Strong, Weatherproof, Die-cast Aluminum enclosures • Permanently Lubricated for years of smooth, quiet operation. • 450° Rotation • Selectable North or South Center • Quiet, Gear Reduction Braking • Quick-disconnect Plug(1) • 117/220 VAC • Fits most USA-made tower shelves.

Models	G-2800SDX	G-1000SDX	G-800SDX	G-800S	G-450A	G-550	G-5500
Application	The top-of-the line rotator for **Extra Heavy-Duty** applications. Total rotation range 450°, with presets	High-performance for **Medium and Heavy-Duty** applications. Total rotational range 450°, with presets	High-performance for **Medium-Duty** applications. Total rotational range 450°, with presets	High Performance for **Medium-Duty** applications. Total rotational range 450°, No presets	For HF/VHF **Light/Medium-Duty** applications, without presets	**Elevation** rotator, for satellite earth station and other space communication antennas	**Azimuth-Elevation** rotator combination for satellite earth station and other space communication antennas.
Wind Load	34 sq.ft.	23 sq.ft.	17 sq.ft.	17 sq.ft.	10 sq.ft.	12 sq.ft.	11 sq.ft.
K-Factor(3)	6870 ft. lbs.	2,020 ft. lbs.	1,299 ft. lbs.	1,299 ft. lbs.	722 ft.-lbs.	578 ft.-lbs.	578 ft.-lbs.
Stationary Torque	1,808 ft.-lbs.	433 ft.-lbs.	288 ft.-lbs.	288 ft.-lbs.	217 ft.-lbs.	101 ft.-lbs.	145 ft.-lbs.
Rotation Torque	57.8-181 ft.-lbs.(2)	43-79 ft.-lbs.(2)	43-79 ft.-lbs.(2)	43-79 ft.-lbs.(2)	43 ft.-lbs.	73 ft.-lbs.	44 ft.-lbs.
Max. Vertical Load	661 lbs.	440 lbs.	440 lbs.	440 lbs.	220 lbs.	440 lbs.	440 lbs.
Backlash	±1/2°	±2°	±2°	±2°	N/A	±3%	±4%
Mast Size	1-7/8–2-1/2"	1-1/2–1/2"	1-1/2–2-1/2"	1-1/2–2-1/2"	1-1/2–2-1/2"	1-1/2–2-1/2"	1-1/2–2-1/2"
360° Rotation	48-150sec.(1)	35-74 seconds(1)	35-74sec.(1)	44 seconds	53 seconds	N/A	58 seconds
180° Elevation	N/A	N/A	N/A	N/A	N/A	67 seconds	67 seconds
Computer Interface	GS-23	GS-23	GS-23	GS-23	N/A	N/A	GS-232
Boom diameter	N/A	N/A	N/A	N/A	N/A	1-1/4 –1-5/8"	1-1/4 –1-5/8"
Rotator Dia. x Ht	8 x 13-5/8"	7-1/2 x 12-1/2"	7-1/2 x 12-1/2"	7-1/2 x 12-1/2"	7-1/2 x 12-1/2"	10-1/2 x 7-1/2"	12-1/2 x 7-1/2"
Weight1	13.2 lbs.	7.7 lbs.	7.5 lbs.	7.5 lbs.	7 lbs.	7.3 lbs.	20 lbs.
Cable Requirement(4)	6-wire	5-wire	5-wire	5-wire	6-wire	6-wire	2 x 6-wire
Price	**$1139.95**	**$519.95**	**$429.95**	**$339.95**	**$259.95**	**$299.95**	**$629.95**

(1) G-800, G-800S include this feature • (2) On models with "SDX" suffix, rotation speed and torque vary with the speed control setting. • (3) K-Factor: Multiply turning radius times weight; add K-Factors for each antenna in multi-antenna installations. The results of the calculation should not exceed the K-Factor rating of the rotator • (4) Belden 9405 (8 conductor) or equivalent is recommended

GC-038 Mast Clamp for 450/800/1000/5500 **$31.95**

GC-048 Mast Clamp for 2800SDX **$47.95**

GS-050 50mm Thrust Bearing for 1-1/4" to 2" mast **$31.95**

GS-065 65mm Thrust Bearing for 1-1/2" to 2-1/2" mast **$47.95**

Satellite Tracking with your PC and the Kansas City Tracker & Tuner

L.L. GRACE

The **Kansas City Tracker** is a hardware & software package that connects directly to Yaesu G5400B/G5500/G5600B or Kenpro 5400A/5600A (& other) rotor controllers & an IBM XT AT, or clone. It controls your antenna array, letting your PC track any satellite or orbital body. The hardware consists of a half-size interface card that plugs into your PC. Includes interface cable, connector and software.

The **Kansas City Tuner Option** provides automatic doppler-shift compensation for Digital satellite work. It's compatible with most rigs including Yaesu, Kenwood, and ICOM. It controls your radio thru the radio's serial computer port or through the radio's up/down mic-click interface. The Kansas City Tuner Option is perfect for low-orbit digital satellites like the NOAA and Microstat satellites.

The KCT and Tuner include custom serial interfaces, and do not use your computer's valuable COMM ports. The software runs in your PC's "spare time," letting you run other programs at the same time.

The Kansas City Tracker and Tuner programs are "Terminate-and-Stay-Resident" programs that attach themselves to DOS and disappear. You can run other DOS programs while your antenna tracks its target and your radios are tuned under computer control. This unique feature is especially useful for digital satellite work; a communications program like PROCOMM can be run while the PC aims your antennas and tunes your radios in its spare time. Status pop-up windows allow the user to review and change current and upcoming radio and antenna parameters. The KCT is compatible with DOS 2.00 or higher.

Satellite and EME Work: The Kansas City Tracker and Kansas City Tuner are fully compatible with N4HY's QUIKTRAK and with Silicon Solution's GRAFTRAK. These programs can be used to load the Kansas City Tracker's tables with more than 50 satellite passes.

DX Contests, and Nets: Working DX or contests and need three hands? Use the Kansas City Tracker pop-up to work your antenna rotor for you. The Kansas City Tracker is compatible with all DX logging programs. A special callsign aiming program is included for working nets.

Packet BBS: The Kansas City Tracker comes complete with special control programs that allow the packet BBS user or control-op to perform automated antenna aiming over an hour, a day, or a week. Your BBS or packet station can be programmed to automatically solicit mail from remote packet sites.

Vision-impaired Hams: The KCT has a special morse-code sender section that will announce the rotor position and status automatically or on request. The speed and spacing of the code are adjustable.

GRA KCT KC Tracker package includes cable for Yaesu/Kenpro 5400/5500/5600 and rotor interface option (connect any rotor)..... **$229.95** • **GRA KCT/T** KC Tracker package + KC Tuner..... **$319.95**

BELDEN Rotor Cable – *See Price Guide*

AES recommends you use Standard Duty cable for runs up to 100 feet. For longer runs, to deliver the proper voltage to the rotator, use heavy duty.

8448 Standard duty, 8 wire For run up to 100 ft.
9405 Heavy duty, 8 wire. For runs over 100 ft.
8484 Standard duty, 4 wire.

PHILIPS

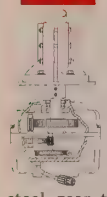
Low Cost **Antenna Rotator**

U-105 Antenna Rotator featuring a one-piece cast aluminum housing, large bearing surfaces, reinforced mast support and a ball bearing for the vertical load. Precision-cut, hardened steel drive train and high torque — well equipped to handle small to medium VHF/UHF amateur and the largest TV & FM arrays. Control unit is smooth and quiet, synchronized with the drive by synchronous motors . **$69.95**

Rotation Range	360° +5°-0
Rotation Time	70 Seconds
Rotation Torque	8 ft./lbs.
Maximum Vertical load	100 lbs.
Support Mast Size	1¼ to 2" diameter
Control unit	7"w x 5¾"d x 2⅜"h
Weight (Rotator + control)	10 lbs
Control cable (4-wire)	Use BELDEN 8484

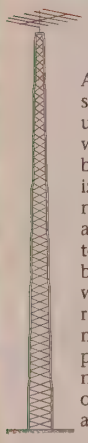
TB-105 Support Bearing for extra-sturdy installation when using the U-105 rotator. Relieves wear and tear on the drive unit imposed by wind loads. All ball bearing design, weather-tight seal. Installs on support mast, above the U-105 ..... **$18.95**

ROTATORS



OR-2800PDC Heavy-duty Rotator Powerful and reliable, rotates multiple HF antennas or large VHF/UHF arrays with ease. The Control Box provides manual features plus heading preset, 10 program. presets, program. ramped start/stop, 1/2-degree target accuracy. Includes RS-232 port for computer control. • Precision worm-gear drive, not reversible by mast torque • Non-slip, ductile iron mast clamps • Large drive plate for masts up to 3" • Heat-treated steel gear train, hardened driveshaft • Prop-pitch style torque plate • Fits inside most popular towers and mates to standard towers/rotator plates • Motor-mounted digital pulse switch for accurate, closed loop control and heading display.. **$1429.95**

Wind Area Capacity ..... 35 sq. ft.
Vertical Load Capacity ..... 1,800 lbs.
Total Height (Rotor Height) ..... 15.75" (9.75")
Mast Size ..... 1.75–3-1/8" O.D
Rotational Speed (360°) ..... 55 to 270 Sec.
Display/Travel resolution ..... 0.1°/0.5°
Input Voltage ..... 110/220V AC, 50/60Hz
Motor Voltage ..... 28-42V DC
Weight (Rotator unit) ..... 42 lbs.



ROHN®

Heavy Duty HDX-Series Towers

All steel with X-brace construction for strength that allows a free-standing configuration without guy wires at 70 mph winds with antennas up to 10 sq. ft. wind area and boom lengths not exceeding 10 ft. Galvanized steel provides an attractive and maintenance-free finish. The entire tower can be assembled on the ground and hinged up in to position with an optional hinged base, or built vertically, section by section. Supplied with BXB base stubs for concrete mounting, rotator plate, mast clamp and hardware. All makes of rotators can be installed on the plate inside of the top section. Tubing furnished can be held in place w/mast clamp on the top plate to act as a thrust sleeve for a 1¼" mast. **Factory Drop Ship**

Model	Height	Sections	Windload @70mph	Weight	PRICE
HBX-40/ BXB-6	40'	5	10sq.ft.	276 lbs.	$490.95
HBX-48/ BXB-7	48'	6	10sq.ft.	353 lbs.	$653.95
HBX-56/ BXB-8	56'	7	10sq.ft.	444 lbs.	$820.95
Heavier Capacity Duty HDBX - Series					
HDBX-40/ BXB-7	40'	5	18sq.ft.	330 lbs.	*$499.95
HDBX-48/ BXB-8	48'	6	18sq.ft.	422 lbs.	$816.95

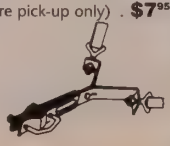
* SALE - limited quantity, Milwaukee ship or Pick-up

The use of a self-supporting antenna mount makes a neat and attractive installation without guy wires.

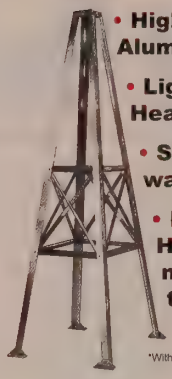
EZ-Ups are Heavy-Duty and Self-supporting – made out of 1¼" tubular steel with triple corrsion protection inside and out. Double embossed collars with six locking screws hold masts up to 1¾". Fast, one-man installation, the legs extend to any rafter spacing. Shipped completely assembled and includes a pitch pad kit and lag screws.

EZ-48-3ABX 3 ft. high, 8.5 lbs **$24.95**
EZ-48-5ABX 5 ft. high, 12 lbs **$34.95**
EZ-516 5' 16 ga. steel mast (Store pick-up only) . **$7.95**

EZ-2924 Heavy Duty Chimney Mount Includes 2 "Y" type mounts and 24' of galvanized strap ... **$12.95**



ROOF-TOP TOWERS



- **High Quality Anodized Aluminum/Satin Finish**
- **Lightweight & Extra Heavy Duty**
- **Stainless Steel Hardware/ Will Not Rust!**
- **Ideal for support of Ham Antennas, Scanners, Weather Monitors, AMSAT, etc.!**
- **Free Shipping***

*Within the 48 continuous states on products over $25

GLEN MARTIN ENGINEERING

•Contact us for a complete GME catalog - *FREE!*
•See price list for a list of products and prices.

MODEL	Height	D' Inches	Base Width	Wind Load²	Max Ant. Load	Ship Weight
RT-424	4.5'	34.75	24"	6sq.ft.	100	18 lbs.
RT-832	8.0'	43.75	32"	8sq.ft.	120	30 lbs.
RT-936	9.0'	43.75	36"	18sq.ft.	130	54 lbs.
RT-1832	17.5'	37.62	32"	12sq.ft.	110	62 lbs.
TB-25	Preminum thrust bearing (Max Mast Dia 2.6")					3 lbs.
MC-10	Mast Clamps, 2 required (Mast 1.3"-2.1" Dia)					2 lbs.
LR-8400	Lighting Rod Kit (order ground cable separately)					12 lbs.

1 Distance from top mounting surface to rotor plate. 2 Wind load rating at 87 mph

Kevlar Cable

Complete Line of Guying Accessories

Specifically KEVLAR is...

•Stronger than steel, at 1/5th the weight.
•3X stronger than Nylon and Polyester.
•Twice the stiffness of glass fiber.

Kevlar is an Aramid fiber that offers a **light-weight replacement for steel guy wires**. KEVLAR guys are non-corrosive and non-conductive, with low elongation, and have the highest combined specific strength and modulus.

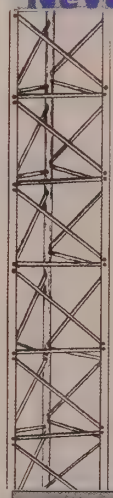
HP-3000	3000 lbs. break Kevlar Cable	Needed for each end of cable: (1) end cap, (1) thimble, (4) u-bolt clips.
HP-4500	4500 lbs. break Kevlar Cable	
HP-7500	7500 lbs. break Kevlar Cable	
See Price List for thimbles, u-bolts & end caps.		

Benefits of Using Kevlar Cable

•Completely **isolates** a tower-guy system from the antenna field.
•Improves **signal coverage** by eliminating distortion caused by re-radiated signals.
•Provides quick, easy, **maintenance-free** tower installations.
•Assures a neater tower appearance with no more corroded steel guys, no troublesome ceramic insulators and no more **white-noise arcing**.

Martin Tower Packages

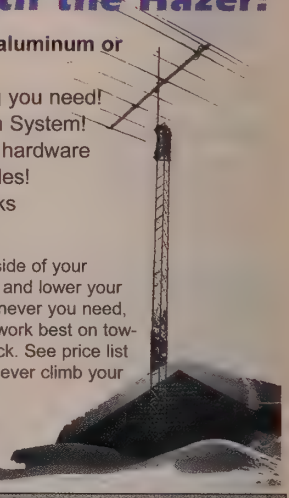
"Never Climb a Tower Again with the Hazer!"



- **Pre-Assembled sections made of strong anodized aluminum or galvanized steel**
- **Convenient / Affordable tower packages-** everything you need!
- **No Climbing-** includes the world famous **Hazer™** Tram System!
- **All-bolted construction-** no welds to break, stainless hardware
- **Safe, Easy "Walk-Up" Tower Installation-** No gin poles!
- **Lifetime investment-** no rust, chipping or freeze breaks
- **Quality Engineering & Competitive Pricing!**

The Hazer is a unique tram system that rides up & down the outside of your **Martin** or **Rohn** tower much like a flag goes up a flagpole. Raise and lower your antennas by simply turning a winch! Work on your antennas whenever you need, when you want! Hazer 2, 3, 4, 5 & 6 wrap around the tower and work best on towers up to 50 feet. Hazer 7 & 22 incorporates its own separate track. See price list for additional accessories (lighting rods, thrust bearing, masts). Never climb your tower again. Let the Hazer do the climbing for you!

MARTIN TOWER PACKAGES COMPLETE WITH: 10' sections, footing assembly, hinge base for easy walk-up installation, Hazer (w/cable, winch, etc.), Kevlar Cable guy kit, turnbuckles, earthscrew anchors, grounding kit, stainless steel hardware, and ***FREE*** 48 state motor freight shipping!



M-1330A	30' x 13" Aluminum tower package w/Hazer 5
M-1340A	40' x 13" Aluminum tower package w/Hazer 5
M-1350A	50' x 13" Aluminum tower package w/Hazer 6
M-1850A	50' x 18" Aluminum tower package w/Hazer 6
M-1860A	60' x 18" Aluminum tower package w/Hazer 7
M-1870A	70' x 18" Aluminum tower package w/Hazer 7
M-2210	100' x 22" Galvanized steel tower pck w/Hazer 22

MODEL	Max. Ant. Load	Wind Ability	Material
H-2	175 lbs.	12 Sq. Ft.	Heavy Aluminum
H-3	150 lbs.	8 Sq. Ft.	Aluminum
H-4	200 lbs.	16 Sq. Ft.	Galvanized Steel
VH8-60	Hazer for 60' Rohn 45, 22 sq. feet @ 87 mph		
VH9-70	Hazer for 70' Rohn 55, 18 sq. feet @ 87 mph		
TB-25	Preminum Thrust Bearing for Hazer mounting plate		

GLEN MARTIN ENGINEERING

See AES price list for a complete guide to GME Products and Prices!

Request product information online at ***http://www.glenmartin.com***

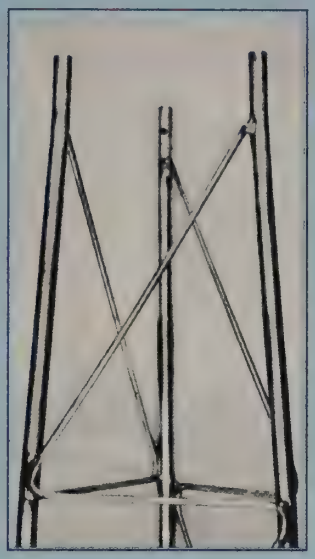
Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

UNIVERSAL TOWERS

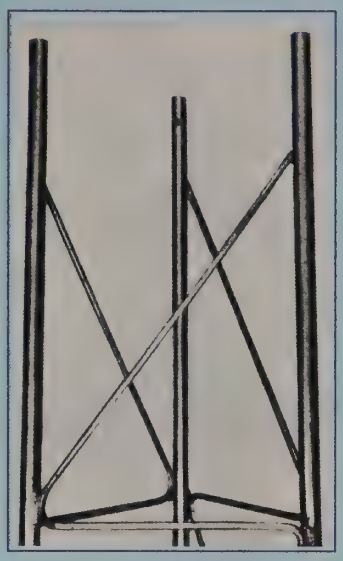
FREESTANDING

LIGHTWEIGHT • RUST FREE • EASY TO ASSEMBLE • RUGGED STRENGTH
for AMATEUR RADIO • TV • FM • INDUSTRIAL • FIRE • POLICE • MARINE

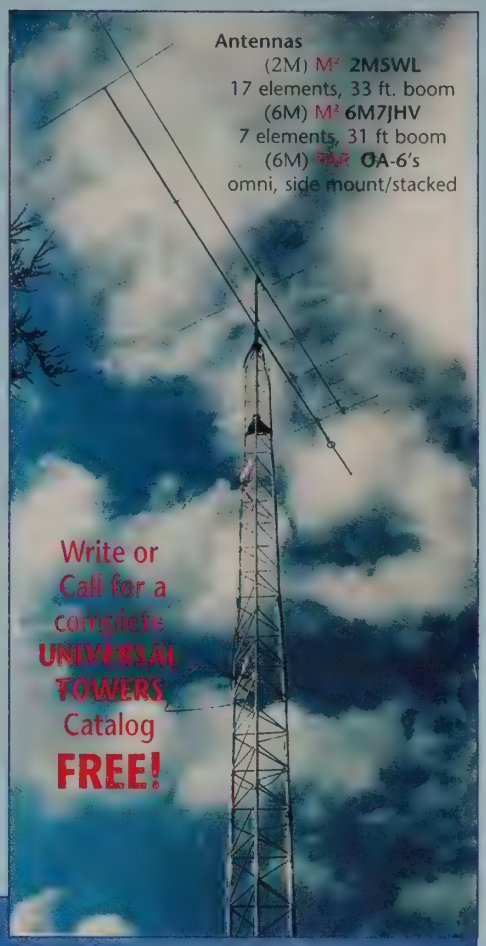
TOP SECTION

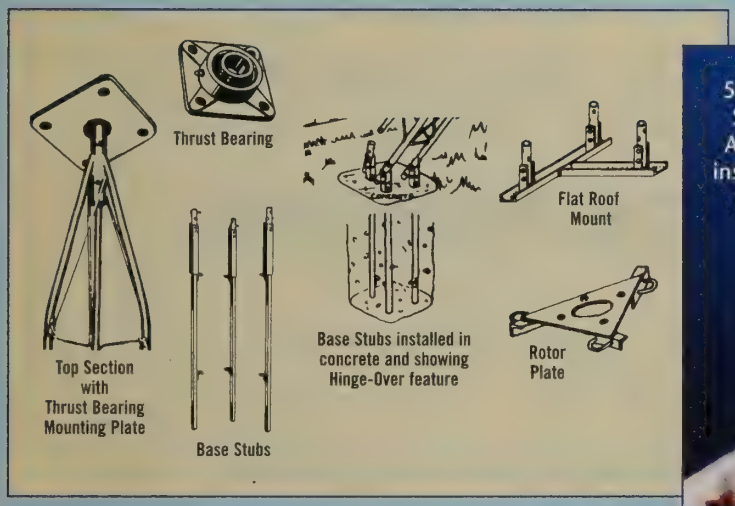


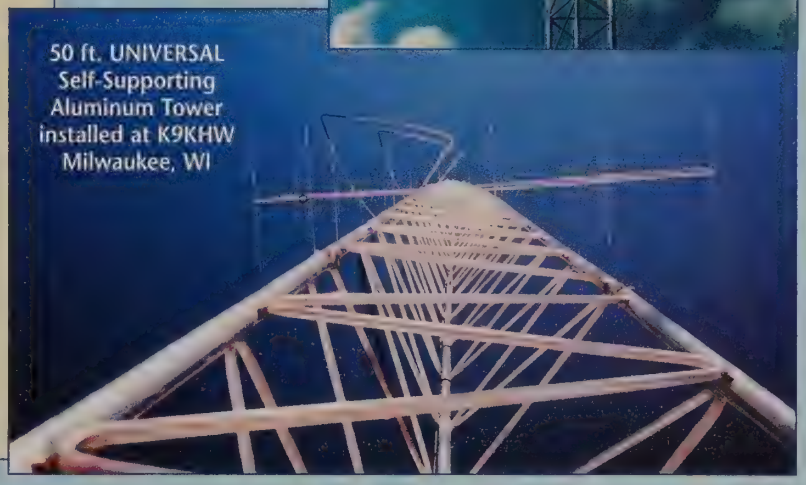
TAPER SECTION



STRAIGHT SECTION







SECTIONS

Universal Aluminum Tower sections are an equilateral triangular welded truss, 10 ft. in length and available 11, 14, 18, 22, 26 or 30 inches wide.

CHOOSING THE PROPER TOWER

(1) Determine the projected surface area of the antenna that you intend to mount. This figure is often in the literature that comes with the antenna. Otherwise: standard T.V. antennas are about 2 sq. ft. in area; 6/10 meter beams and large T.V. antennas, 5 sq. ft. ; 20/40 meter beams, 9 sq. ft.; large 20/40 meter beams or multiple antenna arrays, 18 to 26 sq. ft. Also, when using a rotator to add 1 sq. ft. plus 1 sq. ft. for the mast to whatever size antenna you intend to use.

(2) Decide on the tower height that you want. Universal towers are made in 10 foot sections to give you many possible sizes and the ability to add sections later.

(3) Choose the tower model based on height and windload. The model number is merely the wind loading followed by the height. For example, if your antenna calculation resulted in a tower designed for 5 sq. ft. and you wish it to be 50 ft. high, the model you want is a **5-50**.

See the Price Guide for Configurations and Prices.

No Guys! Self-Supporting at the Rated Load

BEFORE BUYING A TOWER
Consider the advantages of –

ALUMINUM

It's Strong, Lightweight, Rust Free and easy to assemble and erect.

UNIVERSAL offers 10 ft. sections or complete towers ranging from 10 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

Check out our full line of accessories including: **Tower Motor Drives 5 ft. to 20 ft. Antenna Masts • 20 ft. Chromolly Masts • Thrust Bearings • Mast Raising Fixtures • Rotating bases • Coax support arms • Limit Switch Packages**

MA SERIES CRANK-UP TUBULAR TOWERS

Will handle 10 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
MA-40	40 ft.	21' 6"	2	242	3" sq.	4½"	12"x 12"x 12"	$ 679.95
MA-550	55 ft.	22' 1"	3	435	3" sq.	6"	18"x 18"x 18"'	1069.95
MA-550MDP*	55 ft.	22'1 "	3	620	3" sq.	6"	3'x 3'x 5'	2932.95
MA-770	70 ft.	22'1 0"	4	645	3" sq.	8"	3'x 3'x 6'	2529.95
MA-770MDP*	70 ft.	22' 10"	4	880	3" sq.	8"	3'x 3'x 5½'	3999.95
MA-850MDP*	85 ft.	23' 6"	5	1128	3" sq.	10"	4'x 4'x 6'	5391.95

*Standard bases and eave mounts included with all towers (except MA-770, 770-MDP and 850 MDP)
• MDP models complete with heavy-duty motor drive with positive pull down.

FREE STANDING CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TX-438	38 ft.	21' 6"	2	355	12½"	15"	3'x 3'x 5'	$1142.95
TX-455	55 ft.	21' 6"	3	670	12½"	18"	3'x 3'x 6'	1399.95
TX-472	72 ft.	22' 8"	4	1040	12½"	21⅝"	4'x 4'x 7'	2832.95
TX-472MDP*	72 ft.	22' 8"	4	1210	12½"	21⅝"	4'x 4'x 7'	3899.95
TX-489	89 ft.	23' 4"	5	1590	12½"	25⅝"	4'x 4'x 7'	4927.95
TX-489MDPL*	89 ft.	23' 4"	5	1800	12½"	25⅝"	4'x 4'x 8⅛'	7390.95

*TX-472MDP includes heavy duty motor drive with positive pull down. *TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
HDX-538	38 ft	21'6"	2	600	15"	18"	3'x 3'x 6'	$1477.95
HDX-555	55 ft	22'	3	870	15"	21⅝"	4'x 4'x 6'	2099.95
HDX-572	72 ft	22'8"	4	1420	15"	25⅝"	4'x 4'x 7'	4434.95
HDX-572MDPL*	72 ft.	22'8'	4	1600	15"	25⅝"	4'x 4'x 8⅛'	6775.95
HDX-589MDPL*	89 ft.	23'8"	5	2440	15"	30⅝"	5'x 5'x 8½'	8869.95
HDX-689MDPL*	89 ft.	23'8"	5	3450	18"	37⅛"	5'x 5'x 9½'	17,135.95
HDX-5106MDPL*	106 ft.	24'8"	6	3700	15"	37⅛"	5'x 5'x 9½'	18,647.95

*Includes heavy-duty motor drives with dual level wind and positive pull down. MDPL models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds

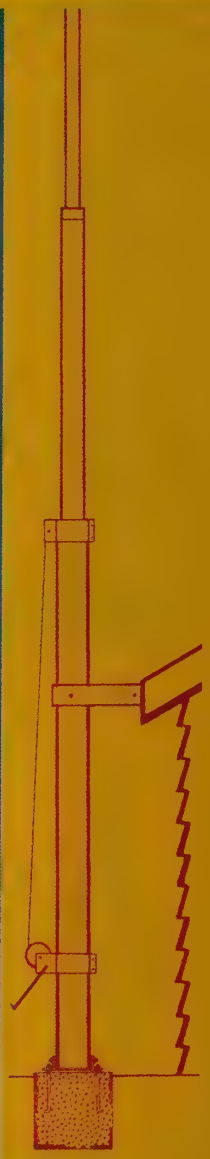
FREE STANDING "LOW-PROFILE" COMPACT CRANK-UP TOWERS

The SS will handle 18 sq. ft. and HD, 24 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11'4"	4	315	10"	18"	3'x 3'x 4'	$1219.95
TMM-433HD	33 ft.	11'4"	4	400	12½"	20⅞"	3'x 3'x 5'	1477.95
TMM-541SS	41 ft.	12'	5	430	10'	20⅞"	3'x 3'x 4½"	1599.95

* Rotators must be top mounted on SS models. Yaesu G800S/SDX will fit in and nest.

*** Any tower purchased with a MDP-750 or MDPL-1000 motor drive MUST be purchased with either the MCL-100 or the RMC-1000.



SEE PRICE GUIDE FOR COMPLETE LIST OF ACCESSORIES

WRITE OR CALL FOR A COMPLETE US TOWER CATALOG – FREE!

Tilt-over Base

Get Ready For The

ORLANDO HamCation℠

Amateur Radio & Computer Show

2000

February 11, 12 & 13

AT THE CENTRAL FLORIDA FAIRGROUNDS
4603 West Colonial Drive Orlando, Florida

Fri. 5 pm to 9 pm (commercial 2, swap tables & tail-gating) Sat. 9 am to 5 pm Sun. 9 am to 3 pm

- ARRL North Florida Section Convention
- 150 Commercial Exhibits
- Over 400 Swap Tables
- Largest Tailgate Area In Florida
- Testing On Saturday
- QSL Card Verification
- Free Parking
- RV Camping On Premises ($16 per night)
- Fox Hunt
- Guest Friendly Central Florida Atmosphere
- Theme Parks Nearby
- Great Food On Premises
- Courtesy Talk-In On 146.76 (Backup Talk-In On 145.11)

Commercial Exhibits	Quentin Jones KU4WD	407-859-7115	qjones@mpinet.net
Swap Tables	Ron Ruebush KE4WBI	407-847-0650	
RV Reservations	Bob Cumming W2BZY	407-333-0690	W2BZY@mpinet.net
General Chairman	Ken Christenson KD4JQR	407-291-2465	KD4JQR@juno.com
Tailgating	Donna Ronco KF4YUF	407-823-7425	
e-mail:	ae4nj@web-cycat.com		

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See the latest equipment. Find swap table bargains. See the largest tail-gating area in the Southeast. There's base stations, mobile rigs, HT's, amps, antennas, call-letter hats, T-shirts, eye-ball QSO's, QSL cards, computers, food, fun and sun. It's ham heaven.

Make your plans now for the 2000 Orlando HamCation.℠

Advanced tickets: **$7.00**
Tickets at the gate: **$9.00**

Three day swap tables $35 advanced. ($45 at the gate.)
Three day tailgating $25 advanced. ($35 at the gate)
Swap table & tailgating participants are required to purchase an admission ticket.

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www.oarc.org/hamcat.html

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SERVICIOS INTERNACIONALES

Estamos cerca del Aeropuerto Internacional de Orlando, Florida ee uu

1-407-898-1166

orlando@aesham.com **www.aesham.com**

ABREVIACIONES IMPORTANTES

AMP	Amplificador
ANT	Antena
AT	Acoplador automatico de antena
BATT	Batteria
BKT	Braket de montura
BPR	Guarda choque
CGR	Cargador
CIG	Conector cigarillo
CNTR	Contador
DB	Decibeles
DLX	Lujo
DPLX	Duplexador
EL	Elemento
FREQ	Frequencia
GND	Tierra
GTR	Labio de ventana
HT	Radio de mano
HVY	Pesado
KYR	Llave
MA	Miliamperes
MAG	Magnetico
MAINT	Mantemiento
MIC	Microfono
MT	Montura
MTG	Montura
NMO	Montura Motorola
PROG	Programable
PS	Fuente de poder
PWR	Poder
RCVR	Receptor
REM	Remoto
SENS	Sensitividad
SPKR	Bocina
SPLX	Simplex
SYS	Sistema
TTP	Teclado de botones
VOL	Volumen
W/	Con
WPM	Palabras por minuto
XCVR	Transceptor

Para Contactar:

AES® • 621 Commonwealth Avenue, Orlando, Florida 32803, EUA Tel. 1-407-894-3238; Toll Free: 1-800-327-1917; Fax: 1-407-894-7553; Internacionales: 1-407-898-1166

Forma de pago: El pago que se prefiere es por transferencia de fondos. Nuestra dirección para la transferencia de fondos es: Nations Bank, Fashion Square Branch, Orlando, FL. Routing #063100277, para crédito a Amateur Electronic Supply – Acct. #2836088068.

Método de envío: El envío se hará de acuerdo con sus instrucciones. Si UD. no las indica AES hallará el método más adecuado.

Garantía: La fábrica garantiza sus equipos únicamente dentro de los Estados Unidos. Si su equipo necesitara reparación debe devolverlo a AES con una copia de la garantía y de la factura dentro del plazo autorizado por el fabricante. AES se reserva el derecho de reparar o substituir el equipo que no funcione como diseñado por razones que no resultaron por daño durante el envío. Al recibír el equipo que no funcione o por defectos debe notificarse a AES antes de los 10 días después de recibido. El equipo debe empacarse en la caja original usando los materiales de empaque originales. **El costo del envío, tanto de ida como de vuelta, es por cuenta del cliente.** Los precios y garantías pueden cambiarse sin previo aviso. Algunos productos no pueden ser exportados a ciertos países de acuerdo con las legislaciones locales.

BRUCE WD4HIM

EDDIE KD4RAZ
Hablo español

ERNIE K1HO

GRANT K4IQW
STORE MANAGER

LUIS WP4JSR
Hablo español

RODRIGO TI2WD
Hablo español

Orlando, FL 407-894-3238 1-800-327-1917

SALES

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

MILES, K9HMQ • Milwaukee

PAUL, N9KEZ • Milwaukee

STEVE, N9SO • Milwaukee

Unlike some dealers, when you purchase a New radio from us our Service Department is able to provide you with outstanding technical support. Our 7 full-time and 4 part-time technicians have more than 70 years of cumulative experience in the ham service field.

Warranty Service

New radios within the manufacturers' warranty period will be repaired at no charge by AES or the manufacturer. Please refer to manufacturers' warranty information when unsure of warranty time periods.

Out-Of-Warranty, Late Model Equipment

Whether the item was purchased from us or not, we will attempt to service it, provided service parts are still available. Before shipping your out-of-warranty items, arrangements must be made by phoning the Milwaukee Service Department at 414-358-4087 9am to 5:30pm Central Time.

Shipping Equipment for Service

Before sending your item, make sure you contact the nearest AES location and find out the time frame for repairs. If you are concerned about time limitations, this will help you determine where to send the repair and how long your radio will be out. Always include the following along with the item being shipped:

- a detailed note describing the problem(s)
- your address, day-time phone number, and email address
- a copy of the original invoice, if the item is still under warranty
- the method of payment (see Policies page for a complete list of options)

After packing your item securely in a box with ample packing materials (foam, styrofoam spacers, etc.), mark the shipping label "ATTN: Service." And, always insure your items when shipping.

Labor Rates

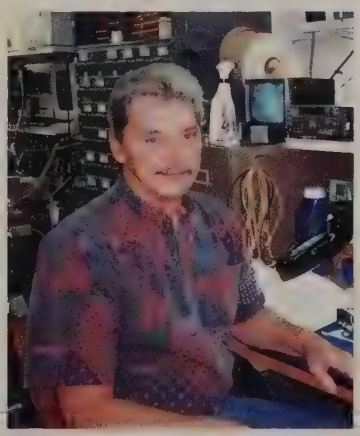
Out-Of-Warranty service $54 per hour

- $72 minimum on HF/VHF base stations
- $54 minimum on VHF mobiles and handheld transceivers

The total cost will also include labor, parts and return shipping.

CALL 414-358-4087 for SERVICE

JOHN, WA8PKB • Wickliffe



GIL, K4ISK • Orlando

RAUL, WD2AEQ • Orlando

We Invite You to Visit the Nearest AES® Location

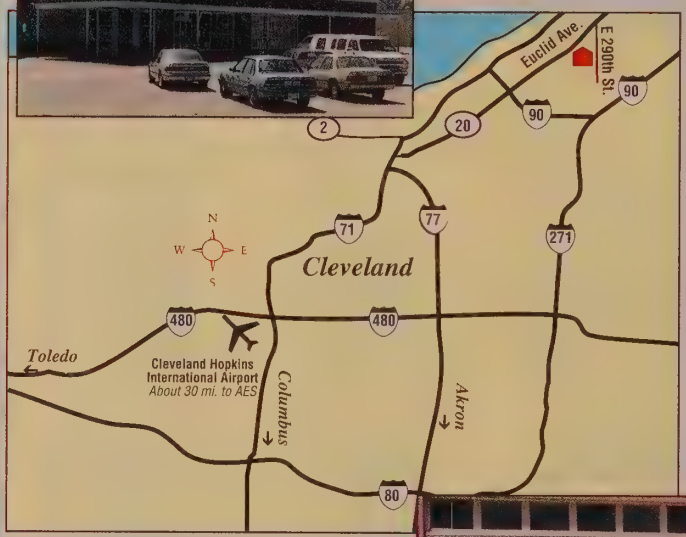
HOURS (all stores): Monday – Friday 9:00 A.M. - 5:30 P.M. • Saturday 9:00 A.M. - 3:00 P.M.

Milwaukee, Wisconsin – *Headquarters*

5710 W. Good Hope Road
414-358-0333 • 1-800-558-0411

Wickliffe, Ohio

28940 Euclid Avenue
440-585-7388 • 1-800-321-3594



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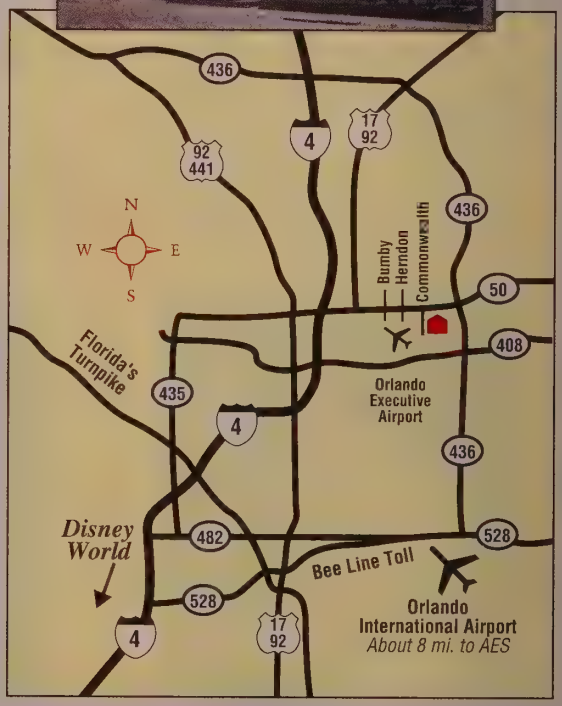
702-647-3114
1-800-634-6227



Orlando, Florida

621 Commonwealth Avenue
407-894-3238 • 1-800-327-1917

Order Toll Free at Four Locations Nation-Wide 1-800-558-0411 WI
Browse Our Store On-Line at www.aesham.com

COD ORDERS Minimum COD order is $20.00, shipment via UPS Ground only (no air or parcel post). The flat-rate, plus a $6.50 COD fee per package applies. Payment by money order or certified check, only.

DAMAGED ITEMS If the customer discovers a damaged shipment, **THE CARRIER SHOULD BE NOTIFIED IMMEDIATELY.** The merchandise should not be returned to us until notified to do so by the carrier. All packaging materials must be retained including styrofoam peanuts, inner and outer cartons, labeling, etc. for inspection by the carrier or the claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.

DEFECTIVE ITEMS Defective items should be returned to Amateur Electronic Supply or the manufacturer for warranty repair or replacement, at our discretion. After processing, we will return it via UPS Ground, prepaid at our expense. If you receive defective equipment, call our Customer Service Department at 414-358-4087 for instructions. Canadians please see *"Canadians Note:"* under TRADE-INS.

INTERNET ORDERS The customer may order products directly on our web site via our internet order form. If the customer does not have access to the web, but has an e-mail account, the customer may e-mail his/her order making sure the following information is included: full name, call sign (not required to order), phone number, billing address, shipping address, item(s) to be purchased (model number and manufacturer) and method of payment. If paying by credit card, we need the card number and expiration date.

PAYMENT Accepted forms of payment are electronic bank transfer, certified check, personal check, money order, credit card (VISA, MasterCard, Discover, American Express, IMPAC), or COD. The customer's choices of payment methods may depend on amount of purchase or destination of shipment.

We accept U.S Government I.M.P.A.C.® Credit Cards

PRICING We will pass on decreases in pricing to our customers whenever possible. Due to foreign currency fluctuations, promotions, manufacturers' specials, etc.; prices may vary, so be sure to confirm prices when ordering. All prices and specifications are subject to change without notice. **AMATEUR ELECTRONIC SUPPLY®** is not responsible for typographical errors or omissions.

REFUNDS Amounts under $5.00 are not refunded unless requested in writing to the Milwaukee headquarters within 12 months.

RETURNS In order to maintain the lowest possible prices, we do not offer a *free trial* or *evaluation period* on new equipment. If permitted, an **Authorized** return of merchandise for credit (it must be like new with all original packaging) will be subject to a **Minimum 15% Restocking Fee.** The item must be returned within **10 days** after receipt, prepaid, with a copy of the purchase invoice and a letter describing the reason for the return. No returns on antennas, towers, cable, items drop-shipped from the manufacturer, audio or video tapes, kits, books, or computer software. Canadians please see *"Canadians Note:"* under TRADE-INS.

SHIPPING Shipping charges, which include adequate insurance, are based on the Order Total at the time of the initial shipment (COD fees not included). The order amount on which charges are determined is pre-coupon and pre-tax. Cancellations on partially shipped orders will not affect the shipping charges. All back-orders from partially shipped orders are shipped PREPAID at the expense of AES® via UPS Ground Service, only.

Shipping calculations on best ground method to the contiguous 48 states have been simplified by utilizing flat-rate categories. Other UPS methods (Red, Blue & Orange) and any USPS methods are charged at regular rates without any credit for UPS ground rates. CODs are not accepted for these faster methods.

Shipments to APO/FPO are via Priority Mail. Orders exceeding UPS or USPS weight, size or value limits will be shipped via Truck or Air Freight collect. Shipping charges taxable in WI, FL & NV.

TRADE-INS Amateur Electronic Supply® accepts trade-ins on new equipment purchases, the worth of which is determined by the electrical and physical condition of the item. Estimates are given assuming the trade-in is in good electrical and physical condition. If it is not, a deduction will be made.

To facilitate a trade-in, the customer can choose one of the following: (A) Purchase the new item(s), send in the trade for evaluation, and have the trade-in amount refunded or credited. (B) Send in the trade and have the order held until the trade-in amount is determined.

When shipping trade-ins for evaluation, use a sturdy carton (double boxing is recommended) and plenty of packing material (see pg. 143). Ship PREPAID & FULLY INSURED. Do not use Bus or Parcel Post. Collect shipments will not be accepted.

AES® assumes no responsibility for damage in transit or for filing of damage claims. Canadians, inquire locally about taxes and/or customs charges before releasing your shipment.

Canadians Note: Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. We will not accept any shipments from outside of the U.S. unless all fees are paid in advance.

BIDS & PURCHASE ORDERS AES® accepts written and signed Purchase Orders from companies, military, schools, colleges, universities and federal, state, county and city Government agencies.

We welcome the chance to bid on your requirements and search the Internet daily for requests from all Government agencies. We are registered with FACNET and accept Government I.M.P.A.C.® charge cards. Net terms available to Government agencies, schools, and companies highly rated in Dunn & Bradstreet.

For more info, contact Paul Szczerbinski, W9KHO (pauls@aesham.com) at AES® Milwaukee. Toll Free: 1-800-558-0411 or Fax: 414-358-3337

AMATEUR ELECTRONIC SUPPLY® LLC

5710 W. Good Hope Road Milwaukee, WI 53223 • 414-358-0333 • Fax 414-358-3337 • Service 414-358-4087

BRANCH STORES			STORE HOURS
28940 Euclid Ave Cleveland, OH 44092 440-585-7388 1-800-321-3594 Fax 440-585-1024 cleveland@aesham.com	621 Commonwealth Ave Orlando, FL 32803 407-894-3238 1-800-327-1917 Fax 407-894-7553 orlando@aesham.com	1072 N Rancho Dr Las Vegas, NV 89106 702-647-3114 1-800-634-6227 Fax 702-647-3412 lasvegas@aesham.com	Monday-Friday 9am to 5:30pm Saturday 9am to 3pm Over 42 Yrs in Amateur Radio

Internet www.aesham.com • E-mail help@aesham.com • Toll Free 1-800-558-0411

ORDER TOLL FREE 1-800-558-0411

6:00 A.M. Pacific to 8:30 P.M. Eastern
Monday – Friday • Saturday to 6:00 P.M.

1-800-321-3594 OH • 1-800-327-1917 FL • 1-800-634-6227 NV
Email Your Questions to info@aesham.com

ORDER BLANK

AMATEUR ELECTRONIC SUPPLY® 5710 W. Good Hope Road • Milwaukee, WI 53223
Local: (414) 358-0333 • *Toll Free:* 1-800-558-0411 •*24-hour FAX:* (414) 358-3337 *Internet:* www.aesham.com • *E-Mail:* help@aesham.com

Salesperson's Name _____
Account No. _____ Date _____
Name _____ Call _____
Address _____
City/State _____ Zip _____
E-Mail Address: _____ Fax: _____
Phone No. (Home) ( ) _____ Hours: _____
Phone No. (Work) ( ) _____ Hours: _____

SHIP TO *(If other than at left):*

IF YOU HAVE MOVED since your last order, please show your old address:

QTY.	MANUFACTURER	PART OR MODEL # • DESCRIPTION	PRICE EACH	TOTAL
			TOTAL AMOUNT OF ORDER	$

LINE 1 — TRADE-IN Allowance (if any) *Enclose mail quotation or reference telephone quote & list Trade-in items on line provided below.*

IMPORTANT! Persons having a Trade-in must check one of the following: (Also, see more important information on next page and on Policies page.)
- ❑ Hold this order until you receive and approve my trade-in.
- ❑ Payment in-full enclosed. Refund allowance when my trade-in is received and approved.
- ❑ Charge the FULL AMOUNT of my order to my Charge Card and Credit my trade-in allowance when my trade-in is received and approved.

-

LINE 2 — Shipping Charges We ship via **best ground method** at *flat-rate* shown on next page, except to APO/FPO made via Priority Mail.
For Faster Service select one of the following: (These methods are not flat-rated so allow for increased shipping charges - no flat-rate credit.)
❑ UPS Next Day Air (Red) ❑ 2nd Day Air (Blue) ❑ 3-Day Select (Orange) ❑ Federal Express ❑ RPS ❑ Express Mail ❑ Priority Mail

+ *Shipping Charges are taxable in Wisconsin, Florida & Nevada*

LINE 3 — Sales Tax: ❑ WI- 5.6%, ❑ FL- 6%, ❑ NV- 7.25%, ❑ OH-5.75% *For Ohio & Nevada figure tax before subtracting trade-in allowance* +

LINE 4 — Credits: AES Refund Checks, Gift Certificates or Manufacturer's Coupons (if any) -

CREDIT CARD INFORMATION

We accept I.M.P.A.C.® Government Credit Cards

Account Number

Cardholder's Name CARD EXPIRES

Cardholder's Signature Date

LINE 5 — Balance $

LINE 6 — Due AES from previous order (if any) +

TOTAL AMOUNT DUE

Choose payment method from below: (Fill in information at right, if applicable)
❑ Bank transfer ❑ Certified check ❑ Personal check ❑ Money order

DO NOT MAIL CURRENCY. Send bank check or money order. Personal check may delay shipping until it clears our bank. Attach remittance to top of order blank.

❑ Credit card (VISA, MasterCard, Discover, American Express, IMPAC)
❑ COD $6.50 fee per package. *Money Order or Certified Check Only.*
MINIMUM $20.00 COD ORDER – NO AIR OR PARCEL POST COD's

$

AMOUNT ENCLOSED -

BALANCE DUE (IF ANY) $

BANK TRANSFER INFO.

MILWAUKEE, WI
M&I Marshall & Ilsley Bank, Milwaukee, WI. ABA #075000051. Further credit to M&I Northern Bank,credit account #8837510 in the name of Amateur Electronic Supply.

WICKLIFFE, OH
Key Bank, Wickliffe Branch, 29310 Euclid Avenue; Wickliffe, OH 44092. Routing #041001039 for credit to: Amateur Electronic Supply Account #350341000239

ORLANDO, FL
Nations Bank, Fashion Square Branch, Orlando, FL Routing #063100277 for credit to: Amateur Electronic Supply Account #2836088068

LAS VEGAS, NV
Bank of America, Decatur Meadows Branch. Routing #122400724 for Credit to: Amateur Electronic Supply Account #260191226

Cut along dotted line or make Photocopy

No Need to Shop Around, We Have It All!

World's Largest Ham Radio Inventory... including accessories

■ Huge Inventory of Major items and all related Accessories ■ Knowledgeable Salespersons ■ Outstanding Mail Order Service ■ Toll Free Lines at all locations ■ BBS, E-mail & Web Site ■ Service Department ■ Major Credit Cards ■ Gift Certificates ■ More!

SAME DAY ORDER PROCESSING
When You Need It ... It's There!

Most orders picked and packed for same day shipment!

FLAT RATE SHIPPING via Best Ground Method in the Lower 48 States

AMOUNT OF ORDER	SHIPPING CHARGES
Up to $100.00	$4.95
$100.01 to $500.00	$9.95
$500.01 to $1,499.99	$14.95
$1500.00 & UP	PREPAID

Flat Rate Does Not Apply To Drop Shipments

Flat Rate Advantage – No Penalty for Number of Cartons or Weight!

EXCEPTIONS TO RATES ABOVE

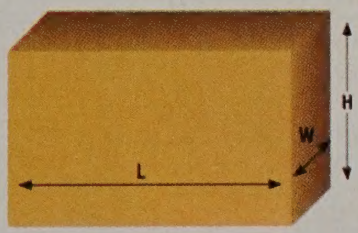
Optional UPS methods (Red, Blue & Orange) and any USPS methods are charged at Regular Rates without any credit for UPS ground rates. CODs are not accepted for these faster methods.

Shipments to APO/FPO & Puerto Rico are via Priority Mail. Orders exceeding UPS or USPS weight, size or value limits will be shipped via Truck or Air Freight collect. Shipping charges taxable in WI, FL & NV.

Please see Policies Page for complete information.

NOTE: Tracking numbers for out-bound shipments are gladly given. Call our local number, 414-358-0333, and ask for tracking number service.

Importance of Proper Packing



$$\frac{L \times W \times H}{194} = \text{Dimensional Weight}$$

Packing

When returning heavy, delicate, and expensive equipment, it must be carefully packed in order to avoid damage caused by normal transportation dynamics. In other words, if you put your FT-1000, TS-850 or IC-751 in a box with little or no packing beneath it, chances are it will sustain some damage. When contents of packages are damaged, claims will be paid only if the carton and packing meet standards set in the International Safe Transit Association Procedure 1 and 1-A. These standards simply state that cartons and packing should provide reasonable protection to their contents. Ideally, contents should be suspended in the center of the carton by the packing material, no less than three inches on all sides for heavy items. For items heavier than 20 pounds, three inches of foam or crumpled paper should be used instead of polystyrene edge protectors.

Include Information

When you send your well-packed parcel to AES for repair, return or trade-in, be sure to include a letter inside the package. Do not reply on information written or taped on the outside of the carton. This information can be destroyed by moisture or abrasion. In the letter, put your call, name, address, phone and reason for return. You may also want to include your e-mail address and times you can be reached.

Dim Weight

When calculating the cost of air shipments, whether Fed-Ex, UPS or other carrier, remember that they use dimensional weight. Dim weights are used to insure adequate revenues per cubic foot of cargo plane space. The formula used to calculate dimensional weight is: L x W x H divided by 194. This means a 12" x 13" x 16" box that weighs six pounds will be sent at the twelve pound rate when an air service is used.

ALINCO, INC.
438 Amapola Avenue, #130
Torrance, CA 90501
310-618-8616 fax: 310-618-8758
alinco@alinco.com

ALPHA DELTA/OUTBACKER/KENT
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Manchester, KY 40962
606-598-2029 fax: 606-598-4413

AMECO
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Mineola, NY 11501
516-741-5030 fax: 516-741-5031

AMERICAN RADIO RELAY LEAGUE
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860-594-0200 fax: 860-594-0303
hq@arrl.org

AMERITRON
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Starkville, MS 39759
662-323-8211 fax: 662-323-6551

AOR U.S.A
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Torrance, CA 90501
310-787-8615 fax: 310-787-8619

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9 Autry
Irvine, CA 92618
714-458-7277 fax: 714-458-0826
www.astroncorp.com

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www.bwantennas.com

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Wood Dale, IL 60191
630-238-1183 fax: 630-238-1186
bencher@bencher.com

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Cleveland, OH 44139
440-248-1200 fax: 440-248-5426
sales@bird-electronic.com

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sales@cesusa.com

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805-642-7184 fax: 805-642-7271
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techsup@cushcraft.com

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Olathe, KS 66062
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tech@icomamerica.com

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sales@kachina-az.com
www.kachina-az.com

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Lawrence, KS 66046
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sales@kantronics.com

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Voorhees, NJ 08043
856-751-1018 fax: 856-751-9705
www.llgrace.com

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360-944-7551
fax:1-800-525-6749
larsen@larsenantennas.com

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7560 N. Del Mar Ave.
Fresno, CA 93711
559-432-8873 fax: 559-432-3059

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San Dimas, CA 91773
909-394-5000
fax: Cust/Service 909-394-7050

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Brea, CA 92821
1-800-376-9992
fax: 714-985-9221
sales@maha-comm.com

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Starkville, MS 39759
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www.mfjenterprises.com

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Starkville, MS 39759
601-323-8287 fax: 601-323-6551

OREGON SCIENTIFIC
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Tualatin, OR 97062-7526
503-639-8883 fax: 503-684-8883

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Tampa, FL 33614-7618
813-874-2980 fax: 813-872-8696
BBS: 813-874-3078

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Escondido, CA 92046
760-747-3343 fax:760-747-3346

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Lantana, FL 33462
561-586-8278 fax: 561-582-1234
par@parelectronics.com

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332-466-5444 fax:332-466-1520
pipo@compuserve.com

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  RX : 100 kHz-961 MHz (cellular blocked)
  TX : 160-6 m/144-148 MHz/430-450 MHz
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- IF Noise Blanker
- SSB, CW, AM, FM, AFSK, Packet (1200/9600 bps) operation
- Detachable Front Panel
- Two Antenna Jacks (HF/50 and 144/430)
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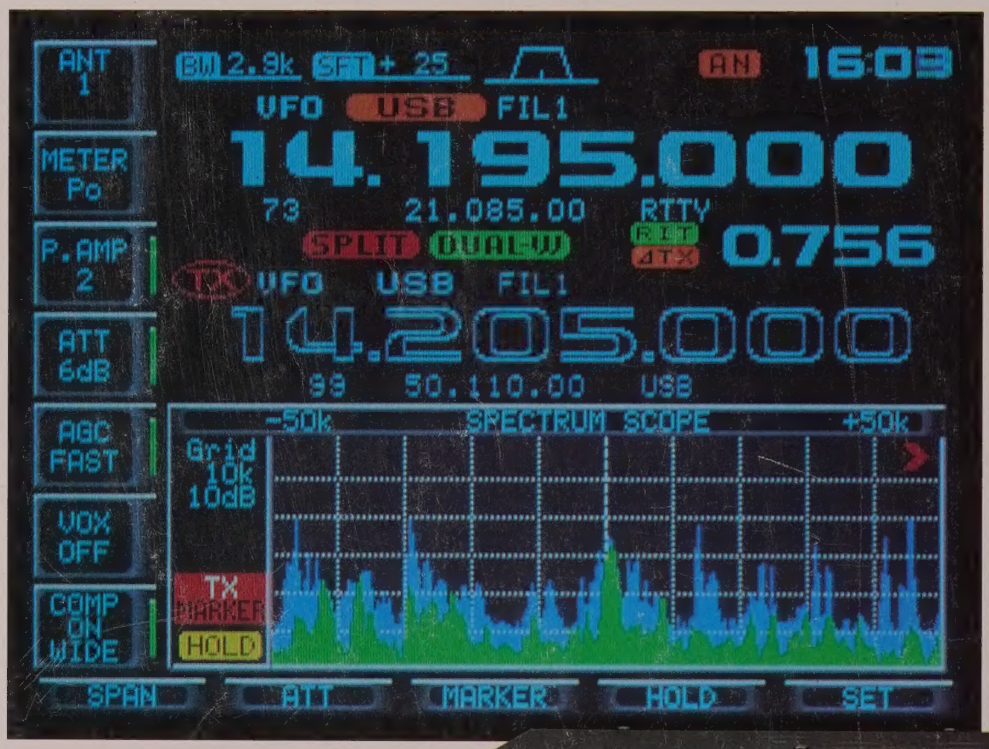

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